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The Council of the Statistical Society of London wish it to be understood, that, while they consider it their duty to adopt every means within their power to test the facts asserted in this Journal, they do not hold themselves responsible for their accuracy, which must rest upon the authority of the several Contributors.

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ERRATUM.

Page 96, line 2, for "1844" (twice) read "1843."

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

APRIL, 1844.

On the best Modes of representing accurately, by Statistical Returns, the Duration of Life, and the Pressure and Progress of the Causes of Mortality amongst different Classes of the Community, and amongst the Populations of different Districts and Countries.—By EDWIN CHADWICK, ESQ., F. S. S.

[*Read before the Statistical Society of London, December* 18*th*, 1843.]

IT has for some time been my wish to call the attention of the Fellows of the Society, and through them the attention of statists in Europe and America, to the best modes of keeping mortuary records, and preparing statistical returns, to show the duration of life and the pressure and progress of the causes of mortality, and the numbers of the population in different districts and countries.

The first topic on which I would ask the attention of the Society, is as to what is the best mode that is at present practicable of representing the annual mortality in any population.

With the permission of the council I am enabled to present for consideration those parts of an official report in which I have endeavoured to illustrate this subject.

The mode generally in use is to take the proportions of deaths to the population, to represent the comparative mortality in different districts; and these proportions are generally given by statists, and received by the public, as representing the average ages of death in any population.

Dr. Price, in his work on Annuities and Reversionary Payments, states that in his time the proportion of deaths in London within the bills of mortality, was rather more than 1 to 22 of the population annually, which he states as an equivalent proposition to saying that the average duration of life to all who died was 22 years. Or, to use his own words, he states that—"One with another, then, they will have an expectation of life of 22½ years; that is, one of 22½ will die every year." (p. 255.) In p. 274 he observes, that—

"In the dukedom of Wurtemberg, the inhabitants, Mr. Susmilch says, are numbered every year; and from the average of 5 years, ending in 1754, it appeared that, taking the towns and country together, 1 in 32 died annually. In another province which he mentions, consisting of 635,998 inhabitants, 1 in 33 died annually. From these facts he concludes, that, taking a whole country in gross, including all cities and villages, mankind enjoy among them about 32 or 33 years each of exist-

ence. This, very probably, is below the truth; from whence it will follow, that a child born in a country parish or village has at least an expectation of 36 or 37 years; supposing the proportion of country to town inhabitants to be as 3½ to 1, which, I think, this ingenious writer's observations prove to be nearly the case in Pomerania, Brandenburg, and some other kingdoms."

By Mr. Milne, in his work on Annuities, and in his article on mortality in the last edition of the Encyclopedia Britannica, by Dr. Bissett Hawkins, and by nearly all statistical writers, the proportions of deaths to the population, and the average ages of death, are treated as equivalent. Dr. Southwood Smith has been misled to adopt the same view. He states in his work on the Philosophy of Health, p. 135, that "There is reason to believe that the mortality at present throughout Europe, taking all countries together, including towns and villages, and combining all classes into one aggregate, is 1 in 36. Susmilch, a celebrated German writer, who flourished about the middle of the last century, estimated it at this average at that period. The result of all Mr. Finlaison's investigations is, that the average for the whole of Europe does not materially differ at the present time." "It has been shown that the average mortality at present at Ostend, is 1 in 36, which is the same thing as to assert, that a new-born child at Ostend has an expectation of 35½ years of life."

Reference is usually made to the writings of Mr. Milne as the authority on whom the proportions of deaths to the population are taken as equivalents of the ages of death, and as data for the construction of tables to show the expenditure of life.

Mr. Milne's data are thus stated in his chapter "On the construction of Tables of Mortality," in the article, "Mortality," in the "Encyclopædia Britannica:" "Now let us suppose," says he, "the population of a place to have remained invariable for one or two hundred years past" (a state of things which it might be difficult to find in any moderate sized market-town for two or three years, much less two centuries), "during which period 10,000 children have been born alive at 10,000 equal intervals of time in each year" (a state of things to which it would be equally difficult to find an approximation at any time or in any place); "also that there having been no migration" (another state of things equally difficult to find), "and the law of mortality having been always the same, both the number of the living and that of the annual deaths have remained constant; the whole of the annual deaths at all ages, as well as the number of annual births, having been 10,000." "Then, if the law of mortality, exhibited in the above table, be that which obtains in the place just mentioned, that table will represent the stream of life which flows through it, and fills the vacancies left by those who advance in age, or are carried off by death, their successors incessantly following and being followed in the same course."

Having assumed these data, he reasons upon the assumption (which, for practical purposes, to which such reasonings are proposed to be applied, appears to me to be as misleading as would be reasoning in physics for practical purposes on assumptions of a perfectly calm sea, and a perfectly regular wind or stationary atmosphere, for two centuries), —and, by a chain of fifteen more propositions, none of which I shall attempt to controvert, demonstrates that "the number of years in the expectation of life at any age is the same as the number of living persons

at that age and upwards, out of which one dies annually. Thus, for example, the expectation of life at 40 years of age being 25·495 years, the proportion of the living in the place, aged 40 years and upwards, who die annually, is 1 of 25·495, or, which is the same, 1000 out of 25,495."

Having of late had occasion to make rather extensive observations on this subject, it appears to be a pubic duty to state, that in no class of persons, in no district or country, and in no tract of time, has the fact hitherto appeared to be in coincidence with these hypotheses; and also that returns of the proportions of deaths to the population, when taken singly, as the exponents of the average duration of life, are often mischievously misleading, exaggerating those chances of life sometimes to the extent of double the real amount. If Dr. Price, instead of resting satisfied with Susmilch's hypothesis, had taken the actual ages of the dying within the bills of mortality, he would have found only a casual approximation to the hypothesis for the whole metropolis; and if he had taken the worst conditioned districts, that, as applied to them, he would probably have found he was in error full one-half. On Mr. Milne's own data it appears, that the proportions of deaths to the population at Carlisle, instead of coinciding with the ascertained average ages of death (i.e. 38·72,) were in the year 1710, 1 in 35; in 1787, they were one in 43; and in 1801, they were 1 in 44. Having caused an average to be deduced from the actual ages of 5,200,141 deaths which occurred in the Prussian States from 1820 to 1834, it appears that instead of 36 years, the actual average age of deaths was only 28 years and 10 months. The average ages of death in France, as deduced from Douvillard's table, founded on the experience of one million of deaths, instead of being 36 years, was 28 years and 5 months.

The public errors, created and maintained by taking the proportions of deaths as exponents of the average ages of death, or of the chances of life to the population, may be illustrated by reference to the actual experience amongst nearly two millions of the population, or upwards of forty-five thousand deaths in thirty-two districts, equivalent to as many populous towns, which the Registrar-General has obligingly enabled me to examine for the year 1839.

The Carlisle table is taken as the standard for the duration of life, to measure the loss of life in the several districts, as that table gives the probability of life from infancy, well ascertained for one town, and nearly coincides with the experience of the annuity offices, on the select class of lives insured by them, and with the results which I have obtained from the mortuary registries, showing the average age of death in the county of Hereford. Each of the recognized insurance tables may, however, be used. If the Carlisle table be taken, the chances of life at infancy would be 38·72; by the Chester table it would be 36·70; by the Northampton, 25·18; by the Montpellier table, 25·36; by the last Swedish table, 39·39; by the experience of Geneva, 40·18. After the attainment of twenty years of age, these several tables give the chances of life as follows:—by the Carlisle table it would be 41·46; by the Chester table, 36·48; by the Northampton table, 33·43; by the Montpellier table, 37·99; by the Swedish table, 39·98; by the Geneva experience, 37·67; and by the experience of the Equitable Society, 41·67. For civic purposes in this country, the most important period for considering the chances of life is after coming of age, or after the attainment of twenty-

one years; the average ages of all who die above that age, in each district of the metropolis, are therefore given to illustrate the extent of loss of life to each class of adults, which is the more important to be observed, as it has been hastily supposed that the pressure of the more common and removeable causes of disease is almost exclusively upon the infant population.

In illustration of the errors occasioned by taking the proportions of deaths as the exponent of the duration of life; if we take the proportions of deaths in the district of Islington, with its population of 55,720, we find the number of deaths for the year only 1 to every 55 of the population, which would appear to be 16 years beyond the chances given by the chief insurance table, deemed a healthy standard; whereas, when we examine the average death of all that population who have died during that year, we find it to be only 29 years; in other words, we find that the average duration of the period of existence has even in that district been shortened by at least nine years below the period assigned by the Carlisle table. If we examine the pressure of the causes of death upon each class of the community, in the same district, we find that the class of artisans, instead of attaining 39 years, have, on the average, been cut off at 19 years; and hence that children and adults, and on the average all those of the labouring classes who have died, have been deprived of 20 years of the natural expectation of life; and that even the class of adults who have died have been deprived of 15 years of working ability, involving extensive orphanage and premature widowhood. If we take such a district as Bethnal Green, inhabited by weavers and a badly conditioned population, the returns of the proportionate number of deaths to the population (1 in 41) would lead to the supposition of an average vitality of nearly double the real amount, which appears from this year's return to be only 22 years for the whole population. For the lowest classes in that district it is no more than 18 years. In the parish of St. Margaret, Leicester, which has a population of 22,000, almost all of whom are artisans engaged in the manufacture of stockings, where the average age of death in the whole parish was, during the year 1840, 18 years, I succeeded in obtaining the ages of death in the different *streets*, when it appeared that this average was made up as follows:—Average age of deaths in the streets that were drained, (and that by no means perfectly,) 23½ years; in the streets that were partially drained, 17½ years; in the streets that were entirely undrained, 13½ years. Though the defective drainage and cleansing was the main cause, it was doubtless not the only cause of this variation. That, however, was a year of a heavy mortality, and the average age of death in that and another district, during the years 1840, 1841, and 1842, was in the streets drained, 25½ years; in those partly drained, 21, and those not drained 17 years. The general average was 21 years. The proportions of death to the population in Leicester were, during the same period, 1 in 36½.

So far as estimates of the number of the people, before a census was taken, may be depended upon, it appears that the proportionate numbers of deaths in the metropolis were, at the commencement of the last century, 1 to 20. At the time the first census was taken (1801) the proportion of deaths to the population within the bills of mortality appeared to be 1 to 39. At the present time it appears to be 1 to 40. Having had the average ages of death within the bills of mortality in the metropolis, cal-

culated from the earliest to the later returns published, they appear to be, as far as they can be made out from the returns, which are only given in quinquennial and decennial periods, as follows:—

Of all returned as having died during the—

	The average Age was: Years,	Months,
22 years, from 1728 to 1749	25	1
25 years, from 1750 to 1774	25	6
25 years, from 1775 to 1799	26	0
25 years, from 1800 to 1825	29	0
6 years, from 1825 to 1830	29	10

Thus, whilst it would appear from the proportionate number of deaths to the population, that the average duration of life in the metropolis has doubled during the last century, it appears from the returns of the average ages themselves, that it has only increased four years and nine months, or about one-fifth. The district of the old bills of mortality comprehends little more than one-half of the metropolis. The average age of death for the year 1839, for the whole metropolis, it will have been seen, is only 27 years. So far as an average for that year for the old district can be made out from the several recent returns, it would appear to be no more than 26 years. But the earlier mortuary registration was known to be extremely defective, especially in the registration of deaths in the poorer districts, and the recent lower averages are ascribable to the closer registration of the infantile mortality in those districts. The earlier returns are only to be regarded in so far as the errors from period to period are likely to have compensated each other; they are only adduced as indicating the degree of proportionate progression, correspondent with the general physical improvements of the population. But the slow general improvement, made up by the great improvements of particular classes, is consistent with the positive deterioration of others. The average age of death of the whole of the working classes we have seen is still no more than 22 years in the whole of the metropolis. In large sub-districts, if we could distinguish accurately the classes of deaths, the average would be found to be not more than half that period: a rate of mortality ascribable to increased over-crowding and stationary accommodation, greatly below anything that probably existed at the commencement of the century. The chief errors in the ordinary statistical returns are errors which cause the extent of the evils which depress the sanatory condition of the population, and the mortality consequent on those evils to be under-estimated.

The erroneous conclusions as to the ages of the populations from the proportions of deaths, have perhaps arisen from assumptions of the existence of states of things rarely, if ever, found, namely, perfectly stationary populations, and perfectly stationary causes of death. I have been asked, "If 1 out of 40 die yearly, must not the average age of all who die be 40 years?" The answer, by actual experience, as we have seen, is, that it is often not 30 years; and perhaps the reason why it is not so will be most conveniently illustrated by hypothetical cases. For example, let it be assumed that in any given year 40 persons die out of 1600, which is in the proportion of 1 to 40, and in consequence of an unusual prevalence of measles, or some disease to which children are subject, the greater number of deaths occur amongst the infant portion of the population, and hence, out of the 40 deaths, 20 occur at 5 years of age, 10 at

25, and 10 at 60. Then the total existence had, would have been (20 × 5) + (10 × 25) + (10 × 60) = 100 + 250 + 600 = 950 years, and this divided by 40, the number who died, would give $\frac{950}{40}$ = 24 years, nearly as the average duration of life to each of the 40 who died.

On the other hand, suppose a severe winter, in which the peculiar causes of mortality may have pressed unusually heavy upon the older lives, and let the numbers who died have been 20 at 60 years of age; 10 at 40; and 10 at 5; in such case, the total existence enjoyed would have been (20 × 60) + (10 × 40) + (10 × 5) = 1200 + 40 + 50 = 1650 years, which, divided by 40, would give $\frac{1650}{40}$ = 41¼ years, as the average duration of life to each.

And again, where, in fact, the proportion of death in one year may be represented as 1 death out of 20 of the population; the average existence enjoyed may be greater than when 1 in 40 died for the reason given in the former case. As for example, in the year when 1 in 20 died, it may have happened that the deaths were among the older lives, and that, taking one with another, the average age of all who died might be 50; while in the other case the mortality might have been amongst the infant population, when the average age might have been 20. If the proportion of 1 in 40, or 1 in 20, were to obtain each year continuously, taking one life with another, the average duration to a population just born, of whom 1 in 40 died, and whose place should be supplied each year by a new birth, would be about 20 years to each life, or one-half; and of a similar population, of whom 1 out of 20 died annually, the average duration of life to each would be about 10 years, or one-half the period at the expiration of which all the lives would have expired.

When these examples are considered, it will be understood that the average age of death may remain stationary, or may go on increasing, whilst the proportions of death remain the same, or vary. The actual mortality of most districts is found to be coincident chiefly with its physical condition, and is most accurately measured by the years of vitality which have been enjoyed, *i. e.* by the average age of death, or the total numbers of years which every individual who has died has lived, divided by the numbers who have died. The numbers of deaths increase or diminish considerably, and frequently create erroneous impressions, whilst the average ages of death are found to maintain a comparatively steady course, always nearest to the actual condition of the population, and give the most sure indications.

The chief test of the pressure of the causes of mortality is then the duration of life in years; and whatever age may be taken as the standard of the natural age, or the average age of the individual in any community may be taken to judge what are the standard numbers of death in that same community. For example, in the returns of the St. George's Hanover Square district, it appears that in 1839, the proportions of death was 1 to 50 of the population; but the average numbers of years which 1325 individuals, who died during that year, had lived, was only 31 years, or 8 years below the average period of life in Carlisle. There was then in that district during that year a total loss of 10,600 years of life, which, at 39 years, may be considered as equal to an excess of deaths of 272 persons, and in a healthy state the proportions of deaths should have been 1 in 63, instead of 1 in 50 of the population.

The effect of migration or of emigration, in disturbing the results of re-

turns of the average ages of death in particular localities, appears to be commonly much exaggerated.

As formerly, when navy surgeons, overlooking the filth of their ships, which has of late been removed, and not perceiving the effects of the atmospheric impurities arising from the over-crowding, which have since been diminished by better ventilation, directed their whole attention to supposed distant causes and mysterious agencies, and were wont to ascribe the whole of the fever which ravaged a fleet to infection from some casual hand, who was found to have been received on board from some equally filthy and ill-kept prison, where the "gaol fever" had been prevalent; so now, in some of our towns, we find much ingenuity exercised to avoid the immediate force of the facts presented by such returns, by a search for collateral and incidental defects in them. Thus, in Liverpool the whole of its vast excess of mortality has been charged upon the poorer passengers who pass through the port. In other towns, also, all the excess of deaths from epidemic or infectious disease is charged upon the vagrant population. In New York and some of the American cities, where inquiries have been stimulated by the example of the sanatory inquiry in this country, a common observation made on the proved excess of mortality is, that a large proportion of "foreigners" frequent the city. An inquiry into the cases themselves would generally show that if, instead of the proportion of the immigrant population being a small per centage, it formed a very large proportion of the population included; still the proportion per cent. of sickness and mortality, from consumption and other diseases, amongst the resident population, is the greatest; and that even in lodging-houses the disease most frequently appears first in the occupants who are stationary, and last in the new comers. In some badly conditioned districts, where there is a very severe mortality observable in children, a less proportionate amount of mortality prevails amongst the adults who are migrant, than on other adults resident in somewhat less depressed districts, but who are more stationary. Of all classes, (unless it be the higher classes, who resort to watering-places,) it is not the sickly and the weakly who travel for subsistence as handicraftsmen, or for subsistence in commerce, but the healthy and robust. In so far as the general results of mortuary registration of any district are disturbed by a population who are migrant, (who are not only above the average strength, but who generally come with the additional advantage of health, by travel in the open air and a purer atmosphere,) they are usually disturbed by unduly raising and giving the locality an appearance of an average of health, and the fatally deceptive chances of longevity that do not belong to it. Whilst, therefore, the localities gain by the average health and strength of the migrant population, other districts have the credit of a share of the excess of disease and mortality which really belong to unhealthy localities. In other words, the population migrating through such districts carry away more disease and mortality from the crowded districts than they take into them. If there had been a mortuary registration at Walcheren, or any pestilential stations productive of an excessive mortality in the army, the registries probably would not have given the localities credit for more than half the mortality which belonged to them. The real sickness and mortality of the more depressed town districts are often made to appear lower than they are by the number of cases treated in distant workhouses,

hospitals, and dispensaries, for which no credit is given to the locality where the cause of death occurred.

It would doubtless proportionately enhance the value of such returns as those in question, if the rule were fully carried out, that "the population enumerated must always be precisely that which produces the deaths registered;" the grand desideratum being, as expressed by Mr. Milne, for insurance purposes, "to determine the number of annual deaths at each age which takes place among the living at the same age;"* but the facts cited of the greater proportion of adults, and of health in those adults who are immigrant, will answer the objections to the superior applicability to local or class insurance tables, deduced from actual local observation of the local rate of mortality prevalent amongst that population, whether migrant or stationary, and without reference to the actual ages of the living (though that were desirable), compared with deductions from any general insurance table, *i. e.*, the experience of a distant and wholly unconnected population. Deductions from tables, however correctly made from the experience of other towns, must be, and are proved, by such experience as that hereafter cited, to be, merely "guess-work." Vide 'General Sanatory Report,' pp. 218, 219. For myself, I make it a general rule of precaution neither to receive nor adduce statistical returns as evidence without previous inquiry, wherever it is possible, into the particulars on which they are founded, or with which they are connected. I adduce them less as principal evidence, proving anything by themselves, than as proximate measures, or as indications of the extent of the operation of causes substantiated by distinct investigations. The general conclusions which the facts that have come to my knowledge tend to establish on the subject of the experience of mortality are, that there is no general law of mortality yet established that is applicable to all countries or to all classes, or to all times, as commonly assumed; that every place, and class, and period has rather its own circumstances and its own law, varying with those circumstances; that the actual experience of any class, or place, or period (even with the disturbances of any ordinary amount of migration, or immigration, or any ordinary influx of young lives from births) is a safer guide than any insurance table deduced from the experience of another people living at another time and place, or any assumed general law.

Though the mean of the actual years of life attained by any population may be the more correct standard for all general purposes, than the proportions of death to the population, yet when the mean ages of deaths are deduced from a miscellaneous and fluctuating population, it doubtless appears to be subject to another source of inaccuracy which requires attention. If the population be increasing, it may be assumed that the increase will be from an increasing number of births; that there will in this case be a larger proportion of young lives from which the deaths will be taken, it being commonly assumed that a certain and unvariably heavy rate of mortality is a necessary incident to infantile life. It is, however, an unproved assumption, that the increase of population arises always and wholly from the increase of births. The increase may, and often does, take place, from the removal of causes of mortality, from an increase of health, and from fewer deaths among the adults, in

* Art. 'Mortality,' Ency. Britan. last edit., p. 524.

the various stages of adult life. It will be hereafter seen, from the increase in the average ages of the living which appears to have taken place in the United Kingdom since the last census, when the ages were taken, that this increase of health in certain classes of adults, is probably a considerable element of the increase in the numbers of the population. The increase in the numbers of the population of any district may have arisen from immigration. The returns under the last census of the birthplaces of the inhabitants shows that in the towns this has been a very considerable element of increase, and in some instances there is strong reason for believing that it must have been the only one.

There are a few places where the population has remained stationary, and the increase having been general, differences of the different rates of increase in different places, will, I apprehend be found not to affect in any considerable degree returns of the average ages of death, as the best available means of comparison of the pressure of the causes of mortality between place and place. But in the comparisons made between town and country, the increase of population in the towns having been made up chiefly by immigration, and that mostly of young unmarried persons, and in all cases of persons of a more vigorous constitution, this increase of population, as already stated, must *increase* the mean ages of death beyond the term properly due to the native town populations.

I cannot, however, permit to pass unchallenged generally assumed "laws" of a heavy mortality as being necessarily and indiscriminately applicable to every stage of infant life. It has been shown, in the Sanatory Report, that in the same districts where one-fourth of the children of the gentry died, more than one-half the children of the working classes have died, and this excess of deaths amongst the poorer classes was traced to preventible causes. The experience of Geneva, and other places which may be cited, I submit disprove the assumption that a large mass of human life is necessarily created to be immediately destroyed.

Yet on this assumption it has been objected that the mean ages of death can only be used as a standard where the ages of the living are ascertained; for that where there is a young population, there *must* be a greater mortality than where there is an old population. This objection substitutes the effect for the cause; it says, "There must be an excessive mortality, because there is an excessively young population;" the facts, when investigated, I apprehend, reverse the sequence, and show that there is an excessively young and burthensome population, because there is an excessive mortality. The excessive mortality slaughtering infants quickens births, from physical laws already explained:—sweeping away adults of the marriageable age before their time, it opens places of work and subsistence, to be occupied by other young adults, and quickens marriages with the young; it sweeps away adults before they attain old age, and thus produces a young population in large numbers. A low average age of death, if continued for any length of time, produces, and is found generally to indicate, the existence of young population. I have examined, with a view to its introduction as an element of vital statistics, the mean ages of the *living* amongst whom the deaths returned occur. Though the pressure of the causes of mortality affects the ages of the entire *living* population, it does not, so far as yet has been observed, affect them in any perceptible coincidence with the mean ages of death. The apparent reason for this is, that in the worst-conditioned districts the

gaps made by death in the ranks of the adults are to a great extent immediately filled up by the immigration of adults, which we know takes place in towns; and the infantile deaths are made up by the rapid reproduction which in all the places yet examined keeps a-head of the mortality of that class. The infantile deaths in one district are sometimes more than double the infantile deaths in another; yet, from the increased amount of births, the *proportions* of the living at that age are the greatest in the districts of the greatest mortality. In Liverpool, for example, where the mean age of death is about 18 years, the mean age of the living is 25 years; and whilst in Herefordshire, where the mean age of death is 39 years, the mean age of the living is between 28 and 29 years. This topic, however, appears to be entirely open to investigation.

Successful investigation must be conducted *in situ*, and by the examination of particular cases, in which returns are to be printed. So far as examination has yet proceeded, wherever one part of the population, or one part of a class of the population, have been located for a length of time in undrained, uncleansed, filthy, and badly ventilated abodes, it is certain that amongst that population will be found a low mean age of death, whatever may be their condition in respect to employment and wages. From the surrounding physical circumstances of the population, if bad, a low average of death, if good the contrary, may with certainty be predicted, whatever may be the age of the living population, its increase, or decrease, or general movement. The mean age of death is found in most steady coincidence with the physical of all other circumstances. The effects of morbid miasma, or the pressure of common causes of disease, are manifested immediately on all surrounding human life, (and there is evidence to believe they are manifest in their degree on animal life,) in its several stages, in proportion to the relative strength of the destructive agents, and the relative strength or weakness of the beings exposed to them; the effects are seen first on infants; then on children, in the order of their age and strength; then on females, or on the sickly, the aged, and feeble; last of all, on the robust workmen, and on them it appears on those parts of the body that have been previously weakened by excess or by illness.

This is not the occasion for exemplifying at length the practical errors that arise in the matter of insurance from the neglect to verify at every step the facts, and from substituting hypothesis and assumed data for actual observations. But I may observe, that in the habits, modes of living, and general circumstances of the gentry and professional persons throughout the country, there is a closer coincidence than perhaps amongst any other class. Nearly all the returns that have been taken, show a coincidence of the mean ages of death, with these circumstances. The mean age of death of the class of gentry or professional persons, inclusive of their children, in towns is about 44 years; in the rural districts it appears to rise higher, and to be about 50 years. The Carlisle insurance table, which is deduced from the *former* experience of *the whole population* of a well-situated town, and which gives an expectation of 38·72 years of life at infancy, is a sufficiently safe basis of experience for the insurance offices, whose class of insurances consists chiefly of gentry and persons of the better condition. But when such tables are attempted to be applied, as they often are, to persons in other circumstances, the extensive ruin of benefit clubs attests the consequence.

The Northampton table, which gives an expectation of life of 25·18 years, might be safely applied to the inhabitants of the drained streets of Leicester, where the average age of death was 25½ years; but if applied as the basis of a society, to insure the casualties of mortality occurring in the undrained streets, where the average age of death was 17 years, the benefits or funds of the institution would be exhausted, and the society would be ruined eight years before its time. Any disturbance from immigration, or from an increase of births, would probably only avert the ruin for a year or two. The consideration of the necessity and value of actual observation I deem the more necessary, in consequence of a form of tables, founded on assumed radixes and hypothetical adjustments, which have occasioned much embarrassment in Germany, having been lately proposed for adoption in this country. The hypothesis on which these tables are formed may be thus stated:—If in 1000 persons born in any country, 500 live beyond 40 years, that is the expectation of life of that population, because at birth it is an equal chance to every one whether it attain 40 years or not. But the fallacy of this hypothetical basis may, I apprehend, be as shortly illustrated by another hypothesis. Suppose that of the 1000, 500 died immediately after birth; that the other 500 lived to attain 40 years, and were immediately cut off. According to the hypothesis, the expectation of life would be 40 years, although the actual mean number of years they all lived was only 20 years. No table of life is, I submit, to be depended upon which gives the population an expectation of life beyond what they actually do get; and what they actually get must be ascertained not by hypothesis, but from trustworthy registries. On the assumed radixes, and by the formula above stated, the expectation of life in the Metropolis is made to be 40 years, in the face of the fact, that by the registries they actually attain less than 30 years. The tables of Mr. Milne's own construction do not agree with the hypothesis; for example, the expectation of life deduced from the years is, by the Carlisle table, 38·72. If it were made up from the period when half the lives on which the table was formed had died, it would have been 41. But in nearly all other tables than his own the difference is wide indeed: for example, by Duvillard's table, which gave 29 years' expectation of life at infancy, but half were dead at 20; by the Montpelier table, which gave 27 years' expectation of female life at infancy, half were dead at 5 years; and for males the expectation of life was 23 years at infancy, whereas half were dead at 4 years. And the new table of mortality prepared by the chief actuaries in the metropolis on the experience of their several offices, and which, commencing at ten years, gives for males and females an expectancy, at 10 years, of 48 years; but it appears that as half the number die at 63, the difference, at this period, is 15 years! Of the 11,650 lives on which the Northampton table was founded, 5735 only, or the half, were living at the expiration of eight years from the year of birth; eight years was therefore, on the hypothesis, the expectation of life; but the years of life actually divided amongst the whole town was 25½ years. A society granting to such a population as that from which this experience was deduced, allowances of yearly payments, or annuities at birth, on the hypothetical deductions of expectation, would on the actual experience be ruined by obligations of payment of nearly three times the extent of those for which funds would probably be provided.

For many public purposes I have submitted it as a desideratum that population returns should give not merely the *numbers* of each class, or of those engaged in each distinct occupation, which only enables us to resort to the fallacious standard of the proportionate numbers of deaths, to judge of the mortality incidental to the class, but the total ages of each class, which would serve as an index of alterations in the sanatory condition of that same class. Such returns of the total ages of the living (as well as of the dying) should, for the public use, be reduced in the returns to their simplest proportions. In the form in which the returns of ages are at present given they appear to be useless to the public. I am unaware of any reference ever being made to them for any purpose. How many persons will be at the trouble of examining two columns of figures, without any aid, to compare the proportions of persons living in different communities? When the public are told that the deaths in London are 1 in 40 per annum, and in Paris 1 in 20, they have some standard of comparison, though, as I have shown, a very erroneous one. But what means have they of judging of the relative strength of populations, not by numbers merely, the units of which may represent infants, but the ages of the living? I am unaware of the existence of any means having been hitherto given of making such a comparison readily and correctly. The Commissioners of the last census give, as their predecessors gave, the ages in quinquennial periods. To take the first, the numbers living under 5 years of age. In attempting to deduce the average ages of every individual living in the community, what evidence is there to show that the great bulk of those living under 5 years of age are not in any one place infants in arms,—a fact which might make an important difference in the average; and so with each period? In order to get out some simple proportion, we are driven, in the absence of any information, to take the mean between the two numbers; and presuming that $2\frac{1}{2}$ may be taken as the average ages of the living under 5 years, to get the total number of years multiply the number living by $2\frac{1}{2}$.

To make returns of ages, whether of the living or dying, useful to the public, without inaccuracy, I propose, as a general rule, that no such returns shall be received without the years of every individual included as living, or as having died being included, the average age of the individual being obtained simply by dividing the total numbers of years by the total numbers of the individuals included. Every person would thus be furnished with a useful standard of comparison. Deduced, as well as they can be, from returns of ages in quinquennial periods, I find that the average age of all who lived in London, at the time of the last census, was 25 years, and is now 26 years and two months. In these facts, as exhibited in the simple proportions, all may understand something of the movement that has taken place; without them the columns of figures are to the majority of persons impenetrable fogs. If the simple proportions were given, the public would be enabled, by such returns, to make comparisons between district and district, and to judge of the relative degrees of pressure, in each, of the causes of mortality. As the simple proportions of average ages of the living have not yet, that I am aware of, been used, or even calculated in any instance, I beg leave to exemplify them.

Mr. Griffith Davies is theoretically of opinion, on a formula of De Moivre, that in general the average age of death in any community is

necessarily higher than the average age of those living in the same community: and that in a stationary population the average age of death will, under ordinary circumstances, be in the ratio of 3 to 2 higher than the average age of the living. I have had the average age of the living population, on which the experience embodied in the Carlisle Insurance table was founded, calculated: and if that may be considered to have been a stationary population, the proportion of the ages of the living to those of the dying was practically as about 3 to 4: for whilst the average age of the dying was $38\frac{3}{10}$, the average age of the living population was $32\frac{9}{10}$. The average age of the dying in Hereford, in which the increase of population had been very slight, was 39. But the average age of the living population, so far as it can be made out from quinquennial returns, was 28 years and 5 months. On this and all returns of the ages of the living, in the mode in which the returns have been collected, allowance must be made for under-statements of ages by some of the adult members of the community. On the whole, the proportion of the ages of the living to the dying appears to be, in an ordinarily healthy and stationary community, as about 3 to 4.

As yet the observations have not been on a sufficiently wide basis; but it appears that wherever there is any divergence between the average ages of the living and the average ages of the dying, the divergence beyond their natural proportions may be taken as indicating the proportionate operation of some disturbing cause upon either line; as by some extraordinary increase of births, or by immigration or emigration, on the average ages of the living, and on the line of the average ages of the dead.

So far as I have been enabled to observe or collect from the extremely imperfect data at present available to the public service, the line of the average ages of the living is comparatively steady; the disturbances by migration and immigration which often compensate each other, for the same place and period, being much the same at different periods, and seldom affect the results materially, whilst the variations in the pressure of the causes of death from year to year are usually considerable, and warrant the assumption that in general the disturbances occasioning the divergence described, are from the operations of causes of death upon that line. Wherever the pressure of the causes of death has yet been observed to be very great, there the line of mortality, or the average age of death, is below what may be called the line of vitality constituted by the average age of the living; and wherever there is on the whole any diminution of those causes of death, as by better ventilation, or by widening streets, opening new thoroughfares, better supplies of water, sewering and cleansing, and improvements in the general habits of the population, there the line of mortality, the infantile mortality especially, diminishes, the average age of each adult class, up to sexagenarians or octogenarians, increases, and the average age of death ascends above the average age of the living. The means of observation are as yet too few to elicit more than indications for the guidance of sustained investigation, to determine whether the divergence of the two lines may be reduced to any rule.

In Liverpool,—where the investigations into the condition of the resident cellar population certainly show an increase of the causes of death, —over crowding, defective ventilation, bad supplies of water, and increased filth,—the average age of death is, for the whole town, 17 or 18 years only, whilst the average age of the living population, so far as it

can be made out from the mode in which the census is prepared, is 25 years. As far as can be ascertained, by reference to previous registers of one large parish, where the ages of the dead were formerly entered, the average duration of life in that town has gradually fallen. The average ages of all who were buried in St. Nicholas parish, between the years 1784 and 1809, was 25.

In Manchester, the average age of the living is 25 years, but the average age of the dying is only 18. In Leeds, the average age of the living is also 25 years, but the average age of the dying is only 21.

	Years.	Months.
The average age of all who *live* in the town parishes of Middlesex, so far as they can be made out from the only available materials,—the returns in quinquennial periods,—is only	26	2
But the average age of all who *die*, judging from one year's return, appears to be about	27	0

If, however, we allow for the under-statement of ages, the two lines for the whole metropolis would be nearly coincident. On the standard of Carlisle or of Hereford, the average age of death should be 12 years higher.

Arranging the several districts of the metropolis, in the order of the average age of deaths, we find the average age of the living decrease in some proportion with the decrease of average age of the dying; and the proportion of births to the population increase with the decrease of the average age of death. The excess in the proportionate number of births beyond the proportions in such a county as Hereford (1 to 44), where the average age of death is much higher, and proportionate number of deaths to the population, afford important indicia.

Districts in which average Age of Death of the whole Population is	Average Age of Death in the District, of all Classes.	Average Age of all who live in the District.	Proportions of Births to the Population.	Proportions of Deaths to the Population.	Excess above County of Hereford in the Number of	
					Deaths & Funerals.	Births.
	Years.	yrs mon.				
Highest . . . (Comprising 2 Districts.) Population 120,678.	35	27 11	1 to 41	1 to 42	966	145
1. Intermediate . (6 Districts.) Population 311,022.	30	27 5	1 to 39	1 to 46	1,836	689
2. Intermediate . (12 Districts.) Population 774,937.	27	26 11	1 to 33	1 to 40	7,457	5,718
Lowest . . . (12 Districts.) Population 663,290.	23	26 5	1 to 30	1 to 41	5,795	6,822

It will be observed that in the least healthy districts, where the pressure of the causes of mortality is the most extensive, the average age of death falls nearly three years and a half *below* the average age of the living, whilst in the higher districts the line of mortality rises towards the natural position, or nearly four years above it. But it must still be borne in mind, in the inspection of the returns from the highest district,

that the average is made up of districts which are probably retrograding, connected with others which are advancing, comprising streets, the connected courts and alleys from which are widely as separate and distinct in condition; and, if I may use such an illustration, as little appropriate for any average that could be represented by numerals—as were the conditions of Lazarus and Dives.

Even the lowest proportion of deaths to the population presented in the district returns, that of Hackney, where it is only 1 to 56, appears to be a proportion in excess by nearly one-eighth, *i. e.* the deaths from epidemics, as well as the excess of more than one-third in the deaths of children under 10 years of age. The return, from the healthiest district in the returns, of the average age of deaths, gives an average of 7 years' loss of life for the whole population; whilst for the *adults* of the middle classes it gives 10 years, and for the *adults* of the working classes 7 years' premature loss of life. Even in the county of Hereford, where there is a proportion of deaths of 1 to 64 of the population, and the standard of the Carlisle table of insurance, where an average age of 39 years of death is attained, it will be observed that even this average includes a large proportion (542), or nearly 1-third in the number of deaths under 10 years of age, and 123 or 1-14th deaths from epidemics, besides others involving deaths from preventible causes. Only 329, or 1 in 5 of the deaths in this very healthy county, were deaths registered as from old age. By the removal of this excess of deaths, the excess of births which replace them would even in these districts be of course still further diminished.

It may be conjectured that if there were the means of distinguishing accurately the various classes of the living amongst whom these deaths fall, the irregularity of the proportionate number of deaths which probably arise amongst the labouring classes would be accounted for. The present returns of the number of births do not distinguish the classes amongst whom the births occur. Taking the districts in the order of the average age in which deaths occur to the labouring classes, and comparing the proportions of the deaths and funerals with the proportions which occur in Hereford, the excess of deaths and funerals was in 1839 as follows:—

Districts in which average Age of Death of Artisans, &c., is	Average Age of Death of Artisans, &c. in the Districts.	Excess in Number of Deaths of Artisans, &c., in the District above the Deaths of Agricultural Labourers in Herefordshire.
1. Highest number of the class (comprising 2 Districts,)	38	483
2. Intermediate (1) number of the class (5 Districts.)	27	548
3. Intermediate (2) number of the class (10 Districts.)	23	1,773
4. Lowest number of the class (15 Districts.)	20	4,121

The totals of the subjoined district returns for the metropolis are as follows:—

	Number of Deaths of each Class.			Number of Deaths from Epidemic Disease.	Average age at Death of all who die above 21.	Average age at Death of the whole Class, including Children.	Ratio of Deaths of Children to total Deaths.	Ratio of Deaths from Epidemic, Endemic, & Contagious Diseases to total Deaths.
	Adults.	Children under 10 years.	Total.					
Gentlemen	1,724	529	2,253	210	60	44	1 in $4\frac{3}{10}$	1 in $10\frac{7}{10}$
Tradesmen	3,979	3,703	7,682	1,428	51	25	1 in $2\frac{1}{10}$	1 in $5\frac{4}{10}$
Labourers .	12,045	13,885	25,930	5,469	49	22	1 in $1\frac{9}{10}$	1 in $5\frac{5}{10}$
Paupers .	3,062	593	3,655	557	60	49	1 in $6\frac{2}{10}$	1 in $4\frac{8}{10}$
Undescribed	2,996	2,761	5,757	1,051	56	28	1 in $2\frac{1}{10}$	1 in $6\frac{6}{10}$
Totals	23,806	21,471	45,277	8,715	53	27	1 in $2\frac{1}{10}$	1 in $5\frac{2}{10}$

In making up this table, all who were not distinguished as master tradesmen were entered as mechanics. This circumstance would give to the labouring classes an appearance of a higher average age of death than is gained by them. On the other hand, some of the labouring classes will be found to have died in the workhouse, which would perhaps keep the average where it now stands, whilst if the registration were more accurate the average age of death of the middle classes might be found to be about 27. The average age of death of 27 given for the whole metropolis is not made as an average of the averages, but from the average of the whole. The apparent high average of the age of death of paupers arises from the smaller proportion of children amongst them: and the larger proportion of aged adults who seek refuge in the workhouse.

The following totals of the mortuary registration of the several registrars' districts in Hereford for the same year are given for comparison:—

	Number of Deaths of each Class.			Number of Deaths from Epidemic Disease.	Average age at Death of all who die above 21.	Average age at Death of the whole Class, including Children.
	Adults.	Children under 10 years.	Total.			
Gentlemen . . .	49	19	68	2	65	45
Farmers, &c. . .	205	45	250	14	60	47
Labourers . . .	833	324	1,157	87	58	39
Paupers . . .	26	11	37	1	71	51
Undescribed . .	124	143	267	19	68	30
Totals . . .	1,237	542	1,779	123	60	39

The total number of births registered in the several districts in the metropolis, where it is yet far from complete, in the year 1839, was 51,232, or 1 to 37 of the population. The total number of births registered in Hereford during the same year was 2579, or 1 to 44.

The positions advanced in the Sanatory Report of the greater proportion of births in the districts where the deaths are the most frequent, is confirmed in respect to the metropolis by a more recent return with which I have been obligingly favoured by the Registrar-General, in which he shows,—

	Proportion per Cent.		Ratio of Deaths to Births.
	Deaths.	Births.	
" Unhealthiest sub-districts . .	3·14	3·66	1 to 1·17
Less unhealthy sub-districts. .	2·68	3·18	1 to 1·19
Average sub-districts . . .	2·43	3·35	1 to 1·38
Healthier sub-districts . . .	2·17	2·64	1 to 1·22
Healthiest sub-districts . . .	1·87	2·47	1 to 1·32

" The mortality is 68 per cent. higher in the unhealthy than in the healthy sub-districts: the proportion of births is 48 per cent. greater in the unhealthy than in the healthy sub-districts."

If the deaths in the metropolis during 1839 had been in the same proportion to the population as they were in Hereford, there would have been 8866 funerals less than there were during that year.

If the proportion of births in the metropolis during that year had been the same as in Hereford, there would have been 16,053 births less than there were.

Or to vary the illustration:—

If the deaths in Hereford had been in the same proportion as the deaths in the metropolis, the community in that county would during that year have had 977 funerals the more.

If the births in Hereford had been in the same proportion as in the metropolis, there would during that year have been 540 births the more.

If the deaths in the whole of England and Wales had been in the proportions attained in some districts, and attainable in all, namely, 1 to 50, there would during the year have been 31,866 funerals less, and more than ten times that amount of cases of sickness the less.

If the proportion of births in the whole kingdom had been the same as those occurring in average healthy districts—such as that of the town district of Hackney, for example, of 1 to 42—there would have been 139.958 births the less to make up for the excess of deaths.

The importance of the subject will justify the reference to other examples.

The Commissioners for taking the census of Ireland have bestowed considerable labour to effect various improvements, with a view to determine more accurately the actual condition and progress of the population. They have attempted, amongst other improvements, to ascertain not merely the total number of houses, but the number of each description of houses in each district. For the want of any system of mortuary or birth registry in Ireland their attempts to ascertain correctly the proportions of deaths and births to the population appear to have been to some degree frustrated; and the return of the average age of death must be received as an approximation, giving higher than the real chances of life in that country. From the mode which the Commissioners adopted, of collecting the ages of the living by taking the actual age of each individual with precautions, it appears probable that their returns on this head are more trustworthy than those obtained in England.

The proportions of births to the population obtained by the Census Commissioners in Ireland are, I conceive, below the real amount; the proportions of deaths are confessedly so. The proportions of deaths and several other results may however serve for comparison between one province and another, and between one county and another. I have taken

the following results from several of their tables, or have had them calculated from their data. I submit them as indications of the momentous public truths that still lie open for investigation, of which truths the most important are the extent of the operation of the causes of mortality, which can only be correctly ascertained on the spot by inquiries for a mortuary registration, by responsible officers of superior qualifications and intelligence as officers of health. The fractional numbers are omitted in the returns from the provinces.

	ULSTER.				LEINSTER.				MUNSTER.				CONNAUGHT.				IRELAND.			
	RURAL.		TOWN.		RURAL.		TOWN.		RURAL.		TOWN.		RURAL.		TOWN.		RURAL.		TOWN.	
	Houses.	Families.	Houses.	Families.	Houses.	Families.	Houses.	Families.	Houses.	Families.	Houses.	Families.	Houses.	Families.	Houses.	Families.	Houses.	Families.	Houses.	Families.
1. First Class houses	1	1	10	9	2	2	24	33	1	1	12	14	·5	·6	7	10	1·3	1·4	15·2	21·
2. "Good farm-houses, or in towns houses in a small street, having from 5 to 9 rooms and windows"	21	21	56	60	21	21	37	39	13	13	14	49	8	8	30	33	16·8	17·2	43·6	46·6
3. "A better description of cottage, still built of mud, but varying from 2 to 4 rooms and windows"	45	45	23	21	47	46	23	16	34	34	30	25	39	39	36	33	41.9	41·7	26·8	21·7
4. "All mud cabins having only one room"	32	32	9	8	28	28	14	10	50	49	13	10	51	50	25	22	40·	39·7	13·7	10·7

	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Average age at death	31·8	32·	23·8	23·6	32·	31·5	25·	25·4	28·2	27·	23·6	23·7	26·1	24·3	22·6	22·4	29·6	28·9	24·1	24·3
	32		24		32		25		28		24		25		23		29		24	
	31				30				27				24				28			
Average term of premature loss of life as compared with the experience of Carlisle or the county of Hereford	7	15			7	14			11	15			14	16			10	15		
	8				9				12				15				11			
Annual proportion of births to the mean population	1 in 31·1				1 in 32·3				1 in 29·5				1 in 28				1 in 30·3			
Average age of all who lived in 1841	24				25				24				23				24			
Proportion of widows to every 100 of the population above 17 years old	12	15			13	17			12	16			12	17			12	16		
Rate of increase on population since 1831	4·36				3·35				7·59				5·58				5·25			
Excess in number of births to every 10,000 of the population above the proportion of births in Hereford	84				73				95				117				90			
Positive numbers of births in excess above the proportion of births in Hereford	20,003				14,515				22,875				16,624				74,016			
Proportion per cent. to total population of persons 5 years old and upwards who can read and write	24	40			26	45			21	36			13	31						
	26				30				23				14							
Proportion of crimes of violence or passion to each 10,000 of the population on an average of 8 years to 1842 — Murders and Manslaughters	·5				·7				1·3				·8							
Proportion of crimes of violence or passion to each 10,000 of the population on an average of 8 years to 1842 — Rapes and assaults to ravish	·2				·3				·4				·4							

The proportion of widowhood (which would generally be attended by its proportion of orphanage) to the short duration of life in the worst conditioned districts, is submitted as confirmatory of the principles expounded in the General Sanatory Report on the Condition of the Labouring Population in Great Britain, p. 188, *et seq.*

Perfect conformity of the rate of increase of population with the ages of the living and the dying was not to be expected in the returns where the emigration from the different provinces is (probably) variable; but in the two provinces where the household condition appears to be the

worst, and the proportion of mud cabins the greatest, there we find the mortality is the highest.

Where the pressure of the causes of mortality is the greatest, where the average age of death is the lowest, and the duration of life is the shortest, there the increase of population is the greatest. The proportion of children is great, because life is short and the generation transient; the middle aged and the aged are swept away in large proportions; and marriages are disproportionately early. But, says Mr. Macculloch in an essay or note in his edition of the "Wealth of Nations," in support of Mr. Malthus's original view, "The effect of wars, plagues, and epidemic disorders, those terrible correctives, as they have been justly termed by Dr. Short, of the redundance of mankind on the principle of population, sets its operation in the most striking point of view. These scourges tend to place an old country in the situation of a colony. They lessen the number of inhabitants, without, in most cases, lessening the capital that is to feed and maintain them." What I apprehend the actual facts when examined place in a striking point of view, is the danger of adopting conclusions deeply affecting the interests of communities, on hypothetical reasonings, and without a careful investigation whether the facts sustain them. The facts themselves, when examined, show that (be it as it may with war) epidemic disorders do *not* lessen the number of inhabitants; and that they *do* in all cases that have been examined lessen the capital that is to feed and maintain them. They lessen the proportion of productive hands, and increase the proportion of the helpless and dependent hands. They place every community, new or old, in respect to its productive economy, in the position which the farmer will understand by the like effects of epidemics upon his cattle, when in order to raise one horse two colts must be reared, and the natural period of work of the one reared is, by disease and premature death, reduced by one-third or one-half. The exposition already given, *vide* General Report, p. 176, *et seq.*, p. 200, of the dreadful misery and disease-sustaining fallacy which erects pestilence into a good, is further illustrated by the effects of the proportions of the dependent populations of Ireland. Thus, in England, the population above 15 and under 50 years of age in every ten thousand is 5025, and this five thousand have 3600 children below 15 years of age dependent upon them. In Ireland, the population above 15 years of age is 4900—in other words, there are 125 less of adults in every ten thousand; and this smaller proportion of living adults, with eight or ten years' span less of life or working ability, have 4050, or four hundred and fifty more children dependent upon them. In England there are 1365 persons in every ten thousand, or 13½ per cent. above 50 years old to exercise the influence of their age and experience upon the community. In Ireland there are only 10 per cent., or 1050 in every ten thousand of the population above 50 years of age.

It appears from a report which the Census Commissioners give on the sanatory condition of Dublin, that the mortality in the different localities of that city varies with their physical condition in the lower districts, and coincides with the description already cited in the general report, from the report of Dr. Speer, the physician to the Dublin Fever Hospital (*vide* General Sanatory Report, p. 96). The like consequences follow to the lower Irish population settled in the English towns with the like habits, which permit them to accumulate refuse round their dwellings,

and live in an atmosphere compounded of the miasma of a pigsty and a privy, and the smoke of a chimney in a crowded room.

Since these results have been published, I have received from Dr. James Willis, of Dublin, a benevolent physician, who has visited the dwellings of the lowest classes, and noted the ages of death in upwards of 12,000 cases, the valuable confirmation of the general conclusions above stated, derived from his extensive observations. He observes that "the census for Ireland gives a correct enumeration of the living, together with a very imperfect account of deaths, which is admitted to be very short of the actual number; yet are put forward 'to show cause why the deaths of Ireland should be, from the present condition of the country, independent of climate or other circumstances of that nature, *less than* those of England.' This is far from being correct; the very contrary is the fact. The mortality amongst our working classes is tremendous." He asks, "is it not horrible to contemplate an island producing as large a proportion of all animal life, as any on the face of the globe, having less of manhood and more of dependent infancy, than anywhere to be found, even in the manufacturing and mining districts of Great Britain!" He gives the following Table of—

The Proportionate Numbers of each Age in Ireland, compared with those in Leeds, Manchester, and Liverpool.

IRELAND, 1841.						Manchester, Leeds, and Liverpool.	
Ages.	Ulster.	Leinster.	Munster.	Connaught.	Total.	Ages.	——
5 and under	15·3090	14·3283	15·3826	16·1861	15·2464	Under 5	13·4053
6 to 10	13·4441	12·3361	13·0558	14·3064	13·2124	5 to 10	10·7092
11 — 15	12·6154	11·3729	11·5807	12·2628	11·9511	10 — 15	10·0235
16 — 20	11·4320	11·5496	11·6448	11·9118	11·6060	15 — 20	9·8328
21 — 30	16·0914	18·7697	18·6351	16·8483	17·6150	20 — 30	20·8821
31 — 40	11·2347	11·7352	12·0031	11·1488	11·5658	30 — 40	15·4189
41 — 50	8·4927	9·3316	7·8535	7·9648	8·4164	40 — 50	9·8329
51 — 60	6·0780	6·0808	6·1819	5·7881	6·0588	50 — 60	5·3327
61 — 70	3·2504	2·9086	2·3997	2·3644	2·7648	60 — 70	3·0155
71 — 80	1·5128	1·1493	·9454	·9073	1·1535	70 — 80	1·1205
81 — 90	·3928	·2990	·1992	·1872	·2773	80 — 90	·2322
91 —100	·0502	·0611	·0456	·0468	·0509	90 —100	·0199
Upwards	·0006	·0012	·0012	·0014	·0011	Upwards	·0020
Not specified.	·0952	·0759	·0701	·0748	·0797	Not specified	·1716
Population on which the per-centage is formed.	238·6373	197·3731	239·6161	141·8859	817·5124	Population	68·1524

In Manchester and Leeds the proportion of children will be increased by immigration to supply the manufactures. In Liverpool, the increase of population has been 34 per cent.; the average age of the living is 25 years. In Manchester, the increase has been 25 per cent.; the average age of the living is 24 years. In Leeds, the increase has been 19 per cent.; the average age of the living was 24 years and 5 months.

From inquiries made by Dr. Willis from cellar to garret, and from house to house in Dublin, he found the average age at death of the working classes was 18 years, decimal 65; which it will be seen is about

the same age as that in one of the lowest districts in London, Bethnal Green; it being in the best districts in London about 30. The average age of death of those of the working classes in Dublin who had attained 21, was no more than 34·70; whilst even in Bethnal Green it is not less, apparently, than 46.

Speaking of the deaths of children he states, "the deaths up to 5th year are rather under those of Manchester, Leeds, &c.; above 5 and up to 10, the mortality is very great, and more than in any of your manufacturing districts. I wish to avoid all theory, yet I cannot resist endeavouring to account for this excess of mortality at the ages 6 to 10.

"The mothers with us have no employment, and, therefore, even in their wretchedness they bring up a greater proportion of infants, say up to 5th or 6th years; from this to the 10th year very many of our poor children have not the same comforts as your factory children, and therefore furnish a larger proportion of deaths."

"The average number of children baptized to each marriage, is 5·70; average number now living to each marriage, 2·67. Of mothers who have had eight or more children, only 1 in 718 never lost a child; of mothers who have had six or more children, only 1 in 215 never lost a child!"

The Census Commissioners of Ireland have endeavoured to obtain returns of the chief causes of the mortality; and it appears from the report upon them, that hitherto, notwithstanding all that has been said and written, that fever has returned nearly decennially in periods, irrespective of any general distress in that country, and has extended its ravages to classes who were exposed to the miasma, but who suffered no distress. "Cases of starvation," it is stated, "have been registered from returns at almost every age; 79 of them took place in the rural district, or 1 death in 11,539 of the general mortality of the open country, and minor towns and villages; 18 in the civic, or 1 in 13,009 of the deaths in towns of or above 2000 people; and 20 occurred in hospitals; the patients having been admitted when suffering from want of food, or in such a destitute condition as subsequently produced death from exhaustion. Including the deaths in hospitals with those in the civic districts, to which they properly belong, it appears that the deaths from want and destitution in the larger towns have been 1 in 7240 to the total mortality of these places. During the first 5-year period, these deaths were on an average but 6 per annum, and in the last 5-year period (that ending June, 1841), they had increased to the yearly average of 18."

The dependency of the duration of life upon the physical condition of the population, and the connection of several classes of moral and economical facts, with the proportionate mortality, may be further exemplified; taking the four counties in Ireland, in which the proportions of mud hovels are the greatest; and the four counties in which the proportions of such tenements are the least.* Having obtained these proportions, I directed the other returns to be obtained in their order, and confidently anticipated the general results, following from the facts indicative of the physical conditton of the population. I now adduce these results, physical and moral, as additional proofs and exemplifications of the conclusions stated in pp. 128 and 129, and other parts of the Sanatory Report.

* The county of Dublin is left out as having a disproportionate amount of suburban population.

	The four Counties where the average proportion of mud hovels, as habitations, is the lowest.				The four Counties where the average proportion of mud hovels, as habitations, is the highest.			
	Down.	Wexford.	Kilkenny.	Monaghan.	Kerry.	Mayo.	Clare.	Cork.
Proportion per cent. of families occupying habitations which are mud cabins having only one room	24·7	29·4	30·9	31·5	66·7	62·8	56·8	56·7
	29				61			
Proportion of deaths from epidemic disease to every 10,000 of the population	36	28·5	36·8	40·4	50·2	51·0	53·1	43·3
	35·5				47·8			
Average age of all who have died during the 10 years ended 6th June, 1841	33·6	34·10	33·2	31·4	24·10	23·2	24·5	28·8
	33·4				26·8			
Average age of all the living in 1841	24·10	25·10	24·8	24·2	23·1	25·0	22·9	24·0
	24·11				23·5			
Proportion of births to the population	1 in 33·4	1 in 34·3	1 in 33·6	1 in 32·5	1 in 28·8	1 in 28·0	1 in 28·7	1 in 31·8
	1 in 33·4				1 in 29·9			
Increase per cent. of the population since 1831	2·7	10·6	7·9	2·5	11·7	6·2	10·9	9·9
	5·0				8·7			
Per cent. of the population, 15 years and under	39·7	36·6	37·8	40·9	42·4	43·1	42·4	39·7
	38·8				41·9			
Above 50 years	12·0	12·5	10·9	10·9	9·4	9·4	8·7	10·4
	11·6				9·5			
Proportion per cent. of male and female population, 17 years and upwards — Unmarried	42	44½	45½	41	37	36	40½	42
	43¼				39			
Proportion per cent. of male and female population, 17 years and upwards — Married	49	47	45½	49½	55	56	51½	50
	47¾				53			
Per cent. of the population 5 years old and upwards, who can neither read nor write	27·5	41·3	51·2	51·3	70·4	79·0	63·1	65·6
	42·8				69·7			
Proportions of crimes* of violence or passion to each 10,000 of the population on an average of 8 years to 1842:—								
Murders and Manslaughters — Proportions	·11	·20	·44	·55	·71	·87	1·08	·52
Murders and Manslaughters — Positive Numbers	34	35	83	88	166	271	249	316
Proportions	·32				·72			
Rapes and Assaults with intent to commit — Proportions	·06	·15	·22	·35	·71	·51	·46	·28
Rapes and Assaults with intent to commit — Positive Numbers	15	22	34	58	166	159	108	178
Proportions	·17				·44			

* By my colleagues and myself, the uncertainty of the returns of commitments, or of convictions, as data to judge of the amount of crime committed in any district, was demonstrated in § 1 to § 4 of our Report as Commissioners of Inquiry into the Condition of the Constabulary Force in England and Wales; but that uncertainty attaches perhaps in the least degree to the higher classes of crimes.

The general sanatory condition of the population of Scotland, and the pressure of the preventible causes of death, appears to be lower than in England, and higher than in Ireland; and so it appears, from the recent census, is the average age of the living.

It may be conceived that the low average age of the living in these cases is ascribable mainly to an increasing proportion of children incidental to an increasing population. Not so, however: the average age of the living is more powerfully influenced by disturbing causes affecting the population of adults, each with accumulated years, than by causes affecting the infantile population. One adult of 50 years added to the living is equal to the addition of 50 infants, and so with the average ages of deaths. The average ages of the living appear to have increased and not diminished with the increasing population. Be the sanatory condition of the poorest classes and the amount of disease and death what it may, as compared with former periods, (and there is direct evidence that it is in populous districts increasing,) there has been some improvement in the residences of the middle and higher classes; household drainage and cleanliness has, in some districts, been improved; the quantity of town and land drainage, and cultivation, has of late increased in various proportions in each country; and the decrease in the causes of mortality appears to have been followed by an increase of the average age of the living, of particular classes at the least, sufficient to present an increase, though a dreadful slow one, in the average age of the adults living. The increase of population, as usually given in census returns only in numero, may have been an increase in number of deteriorated pigmies: the increase in the ages of the living in simple proportions would give the most valuable information. The increase of the proportions of age and of adults is simply represented as follows:—

	England.		Ireland.		Scotland.	
	1821	1841	1821	1841	1821	1841
Per-centage of Population of 15 Years and under . . .	39·09	36·07	41·06	40·44	41·0	36·0
Over 15 Years . .	60·91	63·93	58·94	59·56	59·0	63·6
	Yrs. M.	Yrs. M.	Yrs. M.	Yrs. M.	Yrs. M.	Yrs. M.
Average age of each living individual .	25·3	26·7	23·7	24·0	25·1	25·9

The Irish census affords materials for the belief that statistics may be much extended, so as to embody economic facts which are further illustrative of the economical condition of the country. I will endeavour shortly to exemplify them.

On an inquiry as to the condition of the agricultural population, it was found that the land occupied by large masses of them, is in such small patches, as to preclude the application of capital, to preclude the first step to sanatory as well as productive improvement—thorough drainage, to preclude rotation of crops, the application of various manures, of machinery, and almost to necessitate a systematic misapplication of labour at all times, and to leave the owner or labourer in a state of idleness. The agricultural portion of the Irish census shows that upwards of 40 per cent. of the farms in Ireland are from 1 to 5 acres only; 35 per cent. from 5 to 15 acres; 13 per cent. from 15 to 30; and only 7 per cent. of those about 30 acres. Now the following facts were elicited in the course of some official investigations in Ireland, by

Mr. Muggeridge. The particulars which this evidence indicates, might perhaps be reduced to a statistical form.

"It was once endeavoured to be explained to me, that the comparative lowness of condition of the Irish peasantry arose from a fact that might not have been brought before me, viz., that an Irishman's year has but 200 days! I confessed the proposition was novel to me, and my informant thus logically, and as he considered unanswerably, demonstrated it: You will allow, said he, an Irishman has 52 Sabbaths in which he should not work? Granted. There, then, is 52 days. Not an Irishman in the county Armagh that does'nt attend, at least, one market weekly; there go 52 more days. Find an Irishman, if you can, that does not attend one fair a month; there go 12 more days. Where is the man, if he be at all respectable, that won't devote his afternoon or half day to the wake or funeral of his friend or neighbour: and it is a poor neighbourhood that there won't be a death in a week; there go 26 days more. Then, you know, there are our Saints days, our holydays, our birthdays; and may be Dan will be getting up a precurshin maiting, or the likes o' that, which a man is bound to attend, for the love of Ould Ireland. And now make your reckoning, and see whether a man will have more than 200 days in a year he can call his own.

"There is, I fear, too much of fact in this exquisitely simple and unsophisticated narrative; and much time is lost in the market and the fair, and elsewhere, which, applied to industrial pursuits or objects, would go far to ameliorate the condition of the people. Much of this inertness, or idleness, may unquestionably be ascribed to the low and inadequate rate of wages in Ireland; and to labour mostly being remunerated by a standard too low to call forth those incentives to industry and good workmanship, which are induced by a liberal, or even a fair scale of payment. Hence it is, though paradoxical it may seem, that cheap labour is dear labour, the lack of motive to work will impair the value and efficiency of the labour rendered; and the slovenly and careless manner in which, under such circumstances, work is performed, too often makes it almost valueless to the employer, and as a natural consequence, rarely to be repeated."*

From the evidence already yielded by vital statistics, it will be seen, that the poor Irish peasant, or town labourer, after having escaped the nearly equal chances of infantile mortality, has the productive years of his life, and self-supporting ability, reduced eight or ten years, or nearly one-fourth below the average duration of an agricultural labourer in a healthy English county. From such evidence as that last cited, it will be seen that the Irish peasant has the productive days of his years reduced by nearly one-third, and moreover, from other evidence, (*Vide* Reports of the Agricultural Assistant Commissioners on the Poor Law Inquiry,) it will be seen that the efficiency and value of the hours of his days, of beneficial labour are reduced to nearly one-half, by circumstances which impair and prevent the advantageous application of those energies, which are developed so well, and so productively to himself, in increased wages, when working under more systematised direction in other countries: and finally, from the examination of the census enumeration of ages and the proportions of helpless children, of widowhood, and it is to be presumed of dependent orphanage, it may now be seen to how much

* Report of R. M. Muggeridge, Esq., on the Condition of Hand-loom Weavers, page 726, Part III.

greater extent than in England, the reduced produce, of his reduced hours, and days, and years, has to be divided for the support of the larger proportion of dependant hands, all produced by the heavier pressure of the preventible causes of sickness and mortality. When the range of facts and the conclusions thus developed is duly regarded and estimated, it will be seen how subordinate are the subjects of common declamation as "condition of the people questions" to that of their sanatory condition, even when viewed simply as an economical question of production. Amongst other questions in which a part of the range of statistical evidence throws light, *i. e.* the statistics of the size of the various holdings of land in Ireland, one question is that of fixity of tenure, and it is shown that if by fixity of tenure, is meant fixity of the holdings of all the miserable patches of land held and cultivated separately, the consequence must be the fixity of such hovels and of the habits and poverty entailed by such holdings; that is to say, the fixity of an enormous amount of misery and of a wretched population in perpetuity.

Let me now direct attention to another field of inquiry, differing largely in the amount of productive employment, in institutions, and in most other respects, excepting the chief physical circumstances which govern the sanatory condition of the population.

In abundance of employment, in high wages, and the chief circumstances commonly reputed as elements of prosperity of the labouring classes, the city of New York is deemed pre-eminent. I have been favoured with a copy of "*The Annual Report of the Interments in the City and County of New York for the Year* 1842," presented to the Common Council by Dr. John Griscom, the city inspector, in which it may be seen how little those circumstances have hitherto preserved large masses of people from physical depression. He has stepped out of the routine to examine on the spot the circumstances attendant on the mortality which the figures represent. He finds that upwards of 33,000 of the population of that city live in cellars, courts, and alleys, of which 6618 are dwellers in cellars. "Many," he states, "of these back places are so constructed as to cut off all circulation of air, the line of houses being across the entrance, forming a *cul de sac*, while those in which the line is parallel with, and at one side of the entrance, are rather more favourably situated, but still excluded from any general visitation of air in currents. As to the influence of these localities upon the health and lives of the inmates, there is, and can be, no dispute; but few are aware of the dreadful extent of the disease and suffering to be found in them. In the damp, dark, and chilly cellars, fevers, rheumatism, contagious and inflammatory disorders, affections of the lungs, skin, and eyes, and numerous others, are rife, and too often successfully combat the skill of the physician and the benevolence of strangers.

"I speak now of the influence of the locality merely. The degraded habits of life, the filth, the degenerate morals, the confined and crowded apartments, and insufficient food, of those who live in more elevated rooms, comparatively beyond the reach of the exhalations of the soil, engender a different train of diseases, sufficiently distressing to contemplate; but the addition to all these causes of the foul influences of the incessant moisture and more confined air of under-ground rooms, is productive of evils which humanity cannot regard without shuddering."

He gives instances where the cellar population had been ravaged by fever, whilst the population occupying the upper apartments of the same

houses were untouched. In respect to the condition of these places, he cites the testimony of a physician, who states that, "frequently in searching for a patient living in the same cellar, my attention has been attracted to the place by a peculiar and nauseous effluvium issuing from the door, indicative of the nature and condition of the inmates." A main cause of this is the filthy external state of the dwellings and defective street cleansing, and defective supplies of water, which, except that no provision is made for laying it on the houses of the poorer classes, is about to be remedied by a superior public provision.

	Years.	Months.
The average age of the white population living in New York, according to the Census, is	23	3
But the average age of all who die there is only. . .	20	0

Thus we have an excess of deaths over the ages of the living of more than three years and three months; denoting, if the like excess prevailed from year to year, an increasing pressure of the causes of mortality. If the mortality be the same from year to year, the chances of life would appear to be lower in New York than in Dublin, where, according to the data given by the Census Commissioners, it is 25 years 6 months.

In America little attention and labour appear to have been bestowed in any of the rural districts on general land drainage. Yet nature inflicts terrible punishment for the neglect of the appointed and visible warnings and actual premonitory scourges, amongst which are the mosquitoes and the tribes of insects that only breed in stagnant water and live in its noxious exhalations. The cleansing and the general sanatory condition of the American towns appear to be lower than in England or Scotland, whilst the heat there at times is greater, and decomposition more active; pestilence, in the shape of yellow fever, ague, and influenza, is there more rife; the deaths in proportion to the population more numerous, and the average age of death (so far as there is information) amongst the resident population much lower.

	Years.	Months.
The average age of the whole of the living population in America, so far as it can be deduced from the returns at the periods given in the Census, is only . .	22	2

Notwithstanding the earlier marriages, and the extent of emigration, and the general increase of the population, the whole circumstances appear to me to prove this to be the case of a population depressed to this low age, chiefly by the greater proportionate pressure of the causes of disease and premature mortality. The proportionate numbers at each interval of age, in every 10,000 of the two populations, are as follows:—

	United States of America.	England and Wales.
Under 5 years	1744	1324
5 and under 10	1417	1197
10 ,, 15	1210	1089
15 ,, 20	1091	997
20 ,, 30	1816	1780
30 ,, 40	1160	1289
40 ,, 50	732	959
50 ,, 60	436	645
60 ,, 70	245	440
70 ,, 80	113	216
80 ,, 90	32	59
90 and upwards	4	5
	10,000	10,000
Average age of all the living .	22 years 2 months .	26 years 7 months.

Here it may be observed, that whilst in England there are 5025 persons between 15 and 50, who have 3610 children or persons under 15; in America there are 4789 persons living between 15 and 50 years of age, who have 4371 children dependent upon them. In England there are in every ten thousand persons 1365 who have obtained above 50 years' experience; in America there are only 830.

The moral consequences of the predominance of the young and passionate in the American community are attested by observers to be such as have already been described in the General Sanatory Report as characteristic of those crowded, filthy, and badly administered districts in England, where the average duration of life is short, the proportion of the very young great, and the adult generation transient.

The difference does not arise solely from the greater proportion of children arising from a greater increase of population, though that is to some extent consistent with what has been proved to be the effect of a severe general mortality; the effects of the common cause of depression is observable at each interval of age; the adult population in America is younger than in England, and if the causes of early death were to remain the same, it may be confidently predicted that the American population would remain young for centuries.

	Years.	Months.
The average age of all alive above 15 in America is .	33	6
The average age of all alive above 15 years in England and Wales is	37	5
The average age of all above 20 years in America is .	37	7
In the whole of England the average of all above 20 years is	41	1

The difference at the different stages of age appear also to prevail in proportion to the different pressure of the causes of disease and mortality in different districts in England: *e. g.* In the town parishes of Middlesex the average age of the living above 15 years is 35 years and 10 months; but in Hereford it is 39 years and 2 months. In Middlesex the average age of the adult population, that is of all above 20 years, is 38 years and 8 months; whilst in Hereford it is 42 years and 1 month.

Since these observations were written I have been favoured with a table of the mortality at the different ages of life in Philadelphia, from the year 1830 to 1842, inclusive, from the Board of Health of that city. Travellers, misled by the fallacious assumption of the proportions of death to the population, (a fallacy exemplified in the table itself,) which have ranged from 1 in 33 to 1 in 47, have represented this as a healthy city. It was formerly excessively ravaged by fevers. It has been greatly improved by the introduction of water, and the mortality has been diminished; but it is ill-drained. It is situated, like the worst town districts in England, amidst privies and cesspools, and in other respects its sanatory condition is inferior. In summer the heat is intense, decomposition active, and there is an excessively severe mortality. The infantile mortality appears to be as great as in the lowest districts of Dublin. It will be seen, in the subjoined table, that 50 per cent.—half who are born—die on the average before the fifth year of age. On the proposed hypothetical modes of preparing life tables, the expectation of life in that city to all born would be only 5 years; but the actual mean of existence is 20 years and 7 months to all who die.

MORTALITY IN PHILADELPHIA.

Population in 1830, 167,811; in 1840 (within the limits of the "health laws"), 232,000.

YEARS.	DEATHS. Under 1 Year.	From 1 to 2	2 to 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	90 to 100	100 to 110	110	Total.	Average Age of Death of all who died.	Average Age of Death of all who died above 20 years.	Proportion of Deaths to Population assuming increase of Population to have been regular from 1830 to 1842.	Proportion of Births to Population presuming the increase to have been regular from 1830 to 1842.
																		Years Months	Years Months		
1830	1305	325	260	139	75	99	508	518	353	267	195	100	70	24	2	..	4240	24 11	49 1	1 in 40	1 in 22
1831	1439	444	441	217	74	123	495	559	380	278	220	145	91	30	3	..	4939	21 9	45 6	1 ,, 35	1 ,, 24
1832	1083	530	533	299	109	127	687	705	509	327	261	168	59	14	1	..	5412	23 6	43 6	1 ,, 33	1 ,, 25
1833	1337	375	321	131	78	103	531	534	362	243	185	141	79	17	3	..	4440	22 2	44 3	1 ,, 42	1 ,, 24
1834	1578	442	385	168	81	130	559	547	394	279	244	149	91	21	5	..	5073	21 9	45 3	1 ,, 38	1 ,, 26
1835	1679	655	777	321	88	114	480	487	360	222	187	175	96	18	7	..	5666	18 1	45 11	1 ,, 37	1 ,, 27
1836	1496	412	508	210	73	124	575	638	477	295	242	182	99	22	4	..	5357	22 7	45 3	1 ,, 39	1 ,, 28
1837	1549	544	500	227	76	111	523	509	403	246	226	187	76	19	6	..	5202	20 8	45 8	1 ,, 41	1 ,, 26
1838	1728	635	543	223	77	119	532	497	363	234	207	201	78	22	3	..	5462	19 3	45 7	1 ,, 40	1 ,, 28
1839	1709	589	510	206	51	96	490	447	312	222	216	161	87	14	3	..	5113	18 10	45 9	1 ,, 44	1 ,, 31
1840	1531	435	424	193	81	114	496	501	372	270	232	168	106	19	7	..	4949	21 10	46 7	1 ,, 47	1 ,, 28
1841	1729	665	334	231	79	135	564	507	376	259	235	228	105	18	5	..	5470	20 11	46 5	1 ,, 44	1 ,, 29
1842	1778	665	637	304	91	118	530	558	363	295	249	217	116	20	1	1	5943	19 11	46 8	1 ,, 41	
Average Annual Number of deaths at each Period during the ten years ended 1842	1611	542	494	221	77	116	528	522	378	256	222	181	93	19	4	..	5267	Average age of Death for the ten Years ended 1842	Average Age of Death of all who died above 20 years of age during the ten years ended 1842.		
Proportion per cent of Deaths at each Period to Total Deaths on an Average of ten years ended 1842	31	10	9	4	1	2	10	10	7	5	4	3	2	4	1			20 7	45 9		

Note.—As it is uncertain whether the population for 1830 was given for the same limits, which apparently do not comprehend all the county as well as the city, the two last columns of the proportions of deaths and births to the population must be taken as subject to errors before 1840.

Of the 46 per cent. who die after 20 years, no less than 27 per cent. die under 50 years of age. It will be evident that these ravages of the adult population, in the prime of life, must keep down the age of the whole population. The mean age of the living of the whole white population of the city and county of Philadelphia in 1840, was only 23 years and 7 months, and of the adult population, above 20 years, only 36 years and 5 months. The average of all who die above 20 years of age in that city, appears to be 45 years; in London it is 53 years. Even in Bethnal Green, the lowest district, it is 48 years and 9 months.

The comparative amount of disease and death elsewhere, it need scarcely be said, in no way affects the positive amount of evil in this country, or dispenses with the duty of adopting such practical measures as may be preventive of a single one of the cases of preventible deaths which abound in masses in the large districts having the least unfavourable averages.

The instances have been adduced to exemplify the suggestions of amendment in the mode of measuring the amount and influence of mortality, and more especially to show the importance of giving the average age, as well as the numbers of deaths and the average age of the living, in each class of the community.

The subsequent district returns and the notes extracted from the reports made by the local registrars to the Registrar-General, in corroboration of the General Sanatory Report, will show the immense importance to the community of the facts that require investigation. It cannot be too urgently repeated that it is only by examinations, case by case, and on the spot, that the facts from which sound principles are deduced may be correctly distinguished. They can only be well classed for general conclusions and public use, by persons who have large numbers brought before their actual view and consideration, and who have thus brought before them impressively the common circumstances for discrimination, which no hearsay, no ordinary written information, will present to their attention. The attainment of this immensely important public service might properly have been submitted as a principal, instead of a collateral object, to the improvement of the practice of interment, for the appointment of such a small well-qualified agency as that proposed, of some five or six trustworthy officers of public health for each million of a town population, with the requisite powers and responsibilities for ascertaining the actual amount of the preventible causes of death, and informing the local officers and the public of what is to be done for their removal.

The several modes herein proposed, of rendering vital statistics useful and popular; of ascertaining the pressure of all the complicated causes of death; of determining how much is due to locality, how much to physical circumstances that are removeable, how much to social position; what is the actual amount of life experienced in years under these different circumstances; what is the progress of population under them, and what collateral moral results are measurable by statistical evidence;—these I would submit to the examination of the Fellows of the Society, and would especially ask the consideration of them by the great promoter of statistics in modern times, Mr. Quetelet, of Brussels. Much may be expected from the examinations of such competent investigators as I know are directing their attention to these subjects in the United Kingdom, viz., Dr. Laycock, of York; Dr. Playfair, Dr. Noble, Mr. Roberton, and others in Manchester; Dr. Duncan,

of Liverpool; the Rev. Mr. Clay, at Preston; Mr. Hawksley, of Nottingham,—in aid of the important practical investigations now in progress under the men of distinguished scientific qualifications, acting as Commissioners under the Health of Towns Commission;—by Dr. James Willis, of Dublin; and Dr. Griffin, of Limerick. Abroad there is much new investigation on these subjects. M. Ducpetiaux informs me he is endeavouring to obtain for Brussels a Report on the vital statistics and state of the population, similar to those given in the Sanatory Report.

I was informed by Dr. Sigmund, the imperial physician of Vienna, who was recently in this country, that the paternal government of Austria is now directing its attention to the subject of the waste of life amongst the lower classes, and the means of the improvement of their sanatory condition, and much may be expected from the zealous services of the medical staff, and of such officers as himself and Dr. Becher, and Mr. Czernig. The King of Prussia (who I learn from one of his officers, Dr. Julius, takes a special interest on the subject) has gone at once to the chief remedies, by the appointment of a commission to consider of the best means of improving the sanatory condition of his capital, by a better system of drainage, and by better supplies of water. Since these important steps have been taken the attack of his Queen by an epidemic disease has shown that the guards of palaces cannot exclude the morbific miasma that arises in the greatest strength in the worst-conditioned districts and assail all ranks of society. Such well-considered statistical mortuary returns as Dr. Wagner and Mr. Hoffman of Berlin might furnish, would show its citizens how much, by expenditure in well-executed measures, directed by engineering science, they may gain in the reduction of existing pecuniary burdens alone, that are entailed by an excessive mortality. It yet remains to be seen which government will take the lead in measures of improvement of the physical condition of the population, and the reduction of the mass of human misery.

On one large measure, the prevention of the burial of the dead in churches or in towns amidst the living, the steps taken at Franckfort, in Munich, and the chief towns of Bavaria; in Berlin, and the chief Prussian towns, and in Austria, the administrative arrangements for carrying out that measure, and for consulting the feelings of the lowest classes, and alleviating the painful mental associations with the general doom, and the wise collateral measures for giving security, it will be found, on examination, have no parallel in administrative measures in this country, in France, or in America; though hopes may be expressed that they are not beyond the reach of imitation in these countries. The communication from Dr. Griscom, of New York, and the application for reports and information from benevolent and influential persons in other American cities, afford promise that attention is awakening to the subject of the health and physical condition of the population, even amidst the fury of party passion and conflict in the United States. It was extremely satisfactory to learn, a few months since, that an engineer had been sent from New Orleans to London to examine, with the view to the adoption of, those improved modes of drainage carried out in one division of London, (and in one division only), to which attention had been directed in the Report on the Sanatory Condition of the Labouring Population of Great Britain. It is to be hoped, that Mr. Villermé, who has done so much for vital statistics in France, will not relax in his exertions in showing the amount of depressing causes upon the condition of the

labouring classes, and that he and others will place before the French legislature the irrefragable evidence of immense waste of life in Paris, and show how well, on the lowest pecuniary considerations, it is worth while to buy off all the interests of the *porteurs d'eau* which stand in the way of improved supplies of water, and the means of cleanliness and health being introduced into every house; and all the interests of the *cheffoniers*, who stand in the way of the improved cleansing of its streets, and the purification of that offensively smelling low sanatory and undrained city. Yet it must be confessed, when the smaller administrative districts in this country are examined, not much is found to boast of.

It would be a most useful field of statistical inquiry, in this as well as in other countries, what is the expense in money, in sickness, and mortality at which such interests are sustained. Mr. Whitworth of Manchester has invented a machine, which, by the labour of one man and a horse in 10 hours, sweeps more cleanly a space which could only be swept in the same time by the labour of between 30 and 40 sweepers. He offers everywhere to sweep twice for the same sum, whatever it may be, that is now charged to the public for sweeping once. In only two or three out of the 80 petty jurisdictions into which the metropolis is divided, could he get even a trial of his machine, notwithstanding the demonstration of its success. The scavengers' interest everywhere overpowered the public interest in cleanliness and health, and even the immediate interests of the shopkeepers, in less dusty streets, and less destruction of furniture. He took out patents for the continent and America. At Paris the *cheffoniers*' interest was found to be impregnable. New York is distinguished by the defective cleansing of the lower districts, in which the pig has been the only scavenger. The condition of its streets has been lamented by Dr. Griscom, who has pointed out the great saving which might be produced by a better system; and Mr. Whitworth was at the expense of sending an agent to New York, in the full expectation of a success which he had no where else met with; but the more the efficiency of the machine and the saving of labour were demonstrated, the more he was assured, by profound statesmanlike men, that it would never answer for such a city as that. Was it in the form of the streets, or anything peculiar in their filth that a machine would not remove? far from it: the machine would remove too much. Wherein then was the impracticability? The statesmen's view was accidentally disclosed;—that it had NO VOTES: this was a country of universal suffrage, and a plan which, with every machine introduced, swept away 30 or 40 dependent votes, "would never answer." No public man could be found to support it. Dr. Griscom, the inspector of interments, who had ventured to propose an improved system of cleansing, by which the patronage of 100,000 dollars per annum in bad cleansing would be saved, and who had opened to the citizens in an able report other measures of efficient improvement, has been himself swept away from his office by a change of parties, which always sweeps away indiscriminately whatever public administrative talent may have arisen under such circumstances. The inventor, who would have been ruined by his invention if he had been a poor man, has foregone all efforts in America and in France, and has now endeavoured to enlist the aid of shareholders in a joint-stock company in this country.

The moral atmosphere under which a population is so situated is as offensive and depressing and pestilential as the physical atmosphere under

which it suffers; and it is grievous to experience, and melancholy to contemplate; but still there are facts of promise; we must hope and labour on; and some of the most beneficial labours of those who are fortunate in being placed above and out of the reach of such influences, would be in the production of complete statistical returns, demonstrating, as they must do when complete, the enormous expense in money as well as in pain, sickness, and waste of life, which would make it worth while to buy off, on the most liberal terms, every existing opposing interest to the most certain measures of human improvement.

If there could be intercommunication and simultaneous labours of statists in different places, based on local investigations, each might afford light to advance the labours of the other, and give to vital statistics a public estimation and use beyond any which they have at present obtained!

The subjoined tables are submitted only as imperfect approximations to more improved returns. In them will be found combined the mean ages and deaths prevailing amongst the several classes of society, so far as the present imperfect state of the registries (which the present Registrar-General has shown every disposition to improve) will allow them to be ascertained; together with the mean ages of the living population, and the proportions of births and deaths to the population, and the numbers of deaths from epidemics in each class. The deaths of children were taken up to the period of ten years, not as the best stage, but as the stage necessary for the special purposes for which the returns were obtained, namely, to ascertain the proportions of burials of adults in the Metropolis, all being classed technically as adults who are above that age.

The districts are placed in the order of the average age of death of the whole population during the year 1839, commencing with the highest average.

District.	Class.	Number of Deaths of each Class.			Deaths from Epidemic.	Average Age at Death of all who die above 21.	Average Age at Death, including Children.	Years' Average premature loss of Life by		Proportionate Number of Deaths to Population.	Excess in Number of Deaths above a Healthy standard.
		Adults.	Children under 10.	Total.				Deaths above Age of 21.	Deaths of all Classes.		
		No.	No.	No.	No.	Years.	Years.	Years.	Years.	No.	No.
Greenwich. Population 80,811.	Gentry	62	18	80	9	62	48	..	..		
	Tradesmen	150	97	247	42	54	31	8	8		
	Artisans, &c.	947	414	1,361	227	56	36	6	3	1 in 39	159
	Undescribed	141	110	251	35	58	30	4	9		
	Paupers	109	21	130	17	62	52	..	..		
	Totals and	1,409	660	2,069	330	..	..	..	..	..	..
	Averages	..	..	..	..	57	36	5	3	..	..
		No. of Births 1,780			Age of Living 28			Births 1 in 45			
Camberwell. Population 39,867.	Gentry	58	23	81	11	58	38	4	1		
	Tradesmen	111	86	197	35	54	28	8	11		
	Artisans, &c.	137	134	271	54	51	26	11	13	1 in 51	100
	Undescribed	98	37	135	13	61	42	1	..		
	Paupers	92	6	98	7	62	56	..	..		
	Totals and	496	286	782	117	..	..	..	..	..	..
	Averages	..	..	..	..	57	34	5	5	..	..
		No. of Births 709			Age of Living 27·5			Births 1 in 44			

District.	Class.	Number of Deaths of each Class. Adults.	Children under 10.	Total.	Deaths from Epidemic.	Average Age at Death of all who die above 21.	Average Age at Death, including Children	Years' Average premature loss of Life by Deaths above Age of 21.	Deaths of all Classes.	Proportionate Number of Deaths to Population	Excess in Number of Deaths above a Healthy standard.
		No.	No.	No.	No.	Years.	Years.	Years.	Years.	No.	No.
Hackney. Population 42,274.	Gentry .	50	11	61	6	61	47	1	..		
	Tradesmen	134	94	228	21	52	29	10	10		
	Artisans, &c.	117	120	237	35	55	27	7	12	1 in 56	155*
	Undescribed	80	102	182	36	60	25	2	14		
	Paupers .	46	4	50	1	67	61	..	..		
	Totals and Averages .	427	331	758	99	..	..	..	..	..	..
		..	..	..	..	57	31	5	8	..	..
		No. of Births 995			Age of Living 26·10			Births 1 in 42			
St. George, Hanover Square. Population 66,433.	Gentry .	110	28	138	12	59	45	2	..		
	Tradesmen	112	79	191	23	50	29	12	10		
	Artisans, &c.	528	344	872	130	47	27	15	12	1 in 50	272†
	Undescribed	18	17	35	3	61	32	1	7		
	Paupers .	77	12	89	8	59	51	3	..		
	Totals and Averages .	845	480	1,325	176	..	..	..	..	..	..
		..	..	..	..	50	31	12	8	..	..
		No. of Births 1,260			Age of Living 28·3			Births 1 in 53			

* Mr. W. B. Robinson, the Registrar for West Hackney District, describes the condition of the houses where the greatest mortality prevails as bad, with murky superficial gutters within a yard of the front doors. Supply of water bad, quite insufficient for health, and that only three times a week; cleanliness not prevailing. All these require three things only to render them not less healthy than the other parts of the neighbourhood:—1. Proper and effectual drainage, and removal of superficial drains and gutters. 2. A constant supply of water, so as to wash away impurities in the drains, and enable the inhabitants to preserve a greater degree of cleanliness, &c. 3. That the houses should be kept in better repair, and frequently lime-washed; and the privies should be more frequently emptied, and not allowed to run over; and that any stagnant ditch, within a certain distance from houses, should be covered over.

† Mr. E. Jay, Registrar of Hanover-square District.—Name any particular streets, courts, or houses which, from the number of deaths occurring therein, and the nature of the diseases, appear to you to be unhealthy. —"I should therefore say that the most unhealthy streets, &c., in my district are Oxford-buildings, Brown-street, Toms-court, Thomas-street, Grosvenor-market, Grosvenor-mews, George-street, and Hart street; and to these, perhaps, may be added North-row, and Dolphin-court, and Providence-court, also the north end of Davies-street, adjoining Oxford-street. I have observed small-pox always to exist, when prevalent anywhere, in No. 24, George-street (Grosvenor-market); and much sickness and mortality have occurred in No. 18, Oxford-buildings. Oxford-buildings consist of 18 inhabited houses, containing many wretched families, principally Irish labourers; it was improved lately, in consequence of the exertions of humane individuals, but is still the seat of great poverty and vice. The ventilation here is so bad, that even visiting the houses is a disagreeable duty, from the foul air breathed even for a short space of time. The supply of water is good, and the drainage is reported by those who attend to the subject to be perfect, as it is throughout the parish; but the bad effluvia show that there must be some defect in this point. Three families frequently live in one room, some of the houses containing upwards of 50 persons; many of them live almost entirely on potatoes and herrings, and beer when they can get it. Want of fuel in many cases in winter. Brown-street.—Occupied by the poor and working class; the rooms very small, badly ventilated, and cleansed; the damp kitchens, with frequently stone-floors, are lived and slept in. Living is bad, from the poverty which prevails here. Hart street.—Many poor families reside here, often in great want. Tolerably well drained. Toms court.—Contains eight houses; inhabitants in a wretched state in many cases, partly from want of employ, partly from intemperance. Small pox and epidemics have raged here. George-street.—Some of the houses here are inhabited by working men of a better class, but it also contains others in a wretched condition, in point of cleanliness and ventilation, and much privation is suffered by the inhabitants. Grosvenor-market.—This spot is particularly close, being built almost in *cul de sac*; the houses are dark, badly ventilated, and most unhealthy; the food of some of the poorest principally potatoes; a large slaughter house situated here adds to its unhealthiness; great want of fuel in winter. Grosvenor-mews.—Here the inhabitants are very thickly crowded, and among the children there is always much mortality; in one house, at the time of taking the census, there were 80 persons. The inhabitants consist of coachmen and their families, as do many of the mews in this district. This class is frequently intemperate; they live over stables, are ignorant of the necessity of free ventilation, and many appear to suffer in consequence. New comers from the country complain of the want of free air, to which they ascribe their deteriorated health. Thomas-street.—Some of the houses in bad condition, and inhabited by the poorest families. No attention to ventilation. Supply of butchers' meat casual and infrequent. Pneumonia and bronchitis are frequently fatal in these poorer districts; and he who enters the damp, dark, underground kitchen,—in which all the occupants live and sleep, in which the room is made more close by a fire required for their cooking, the atmosphere is loaded with moisture from wet clothes hung across the narrow space to dry, and probably some child ill of disease,—sees that such a state of surrounding circumstances shuts out all chance of recovery in at least the majority of cases."

District.	Class.	Number of Deaths of each Class. Adults.	Children under 10.	Total.	Deaths from Epidemic.	Average Age at Death of all who die above 21.	Average Age at Death, including Children.	Years' Average premature loss of Life by Deaths above Age of 21.	Deaths of all Classes.	Proportionate Number of Deaths to Population.	Excess in Number of Deaths above a Healthy standard.
		No.	No.	No.	No.	Years.	Years.	Years.	Years.	No.	No.
Rotherhithe. Population 13,916.	Gentry . .	6	..	6	1	57	49	5	..	1 in 41	79
	Tradesmen	12	2	14	2	50	40	12	..		
	Artisans, &c.	70	14	84	2	51	40	11	..		
	Undescribed	78	121	199	50	52	19	10	20		
	Paupers .	33	5	38	3	68	56	..	..		
	Totals and	199	142	341	58	..	..	..	..	..	..
	Averages .	..	..	..	..	54	30	8	9	..	..
		No. of Births 385			Age of Living 26·7			Births 1 in 36			
St. Olaves. Population 18,427.	Gentry . .	4	..	4	..	64	..	..	..	1 in 19	229
	Tradesmen	55	46	101	24	48	25	14	14		
	Artisans, &c.	603	215	818	107	43	30	19	9		
	Undescribed	5	14	19	7	50	16	12	23		
	Paupers .	47	4	51	8	59	54	3	..		
	Totals and	714	279	993	146	..	..	..	..	..	..
	Averages .	..	..	..	..	45	30	17	9	..	..
		No. of Births 519			Age of Living 27·0			Births 1 in 36			
Kensington, (including Chelsea). Population 114,952.	Gentry . .	193	50	243	17	60	45	2	..	1 in 51	582
	Tradesmen	204	120	324	33	50	30	12	9		
	Artisans, &c.	559	619	1,178	223	53	24	9	15		
	Undescribed	202	181	383	47	58	30	4	9		
	Paupers .	106	36	142	24	61	44	1	..		
	Totals and	1,264	1,006	2,270	344	..	..	..	..	..	..
	Averages .	..	..	..	..	55	29	7	10	..	..
		No. of Births 2,782			Age of Living 27·5			Births 1 in 41			
Islington. Population 55,720.	Gentry . .	83	35	118	11	61	42	1	..	1 in 55	261
	Tradesmen	151	121	272	43	50	26	12	13		
	Artisans, &c.	177	260	437	108	47	19	15	20		
	Undescribed	106	27	133	9	61	46	1	..		
	Paupers .	49	10	59	3	60	49	2	..		
	Totals and	566	453	1,019	174	..	..	..	..	..	..
	Averages .	..	..	..	..	54	29	8	10	..	..
		No. of Births 1,177			Age of Living 26·11			Births 1 in 47			
St. Martin in the Fields. Population 25,195.	Gentry . .	23	4	27	2	57	46	3	..	1 in 36	200
	Tradesmen	60	47	107	22	45	24	17	15		
	Artisans, &c.	165	137	302	82	48	26	14	13		
	Undescribed	89	112	201	42	51	21	11	18		
	Paupers .	68	4	72	4	65	60	..	..		
	Totals and	405	304	709	152	..	..	..	..	..	..
	Averages .	..	..	..	..	52	28	10	11	..	..
		No. of Births 601			Age of Living 28·4			Births 1 in 42			

District.	Class.	Number of Deaths of each Class. Adults.	Children under 10.	Total.	Deaths from Epidemic.	Average Age at Death of all who die above 21.	Average Age at Death, including Children.	Years' Average premature loss of Life by Deaths above Age of 21.	Deaths of all Classes.	Proportionate Number of Deaths to Population.	Excess in Number of Deaths above a Healthy standard.
		No.	No.	No.	No.	Years.	Years.	Years.	Years.	No.	No.
Poplar. Population 31,091.	Gentry . .	16	7	23	2	61	43	1	..	1 in 47	186
	Tradesmen	44	40	84	14	51	26	11	13		
	Artisans, &c.	235	240	475	80	53	25	9	14		
	Undescribed	19	10	29	2	63	36	..	..		
	Paupers .	45	3	48	2	64	53	..	..		
	Totals and	359	300	659	104	..	..	..	..	..	..
	Averages .	..	..	..	..	55	28	7	11	..	..
		No. of Births 1,106			Age of Living 25·10				Births 1 in 28		
Marylebone. Population 137,955.	Gentry . .	156	40	196	20	59	46	3	..	1 in 45	857
	Tradesmen	198	172	370	57	51	27	11	12		
	Artisans, &c	682	759	1,441	251	48	23	14	16		
	Undescribed	347	324	671	104	54	27	8	12		
	Paupers .	288	73	361	61	54	42	8	..		
	Totals and	1,671	668	3,039	493	..	..	..	..	..	..
	Averages .	..	..	..	..	52	28	10	11	..	..
		No. of Births 3,511			Age of Living 27·9				Births 1 in 39		
Stepney. Population 90,657.	Gentry . .	64	9	73	3	65	56	..	..	1 in 41	620
	Tradesmen	169	104	273	47	53	31	9	8		
	Artisans, &c.	568	591	1,159	247	48	23	14	16		
	Undescribed	203	274	477	101	56	22	6	17		
	Paupers .	189	28	217	28	63	54	..	..		
	Totals and	1,193	1,006	2,199	426	..	..	..	..	..	..
	Averages .	..	..	..	..	53	28	9	11	..	..
		No. of Births 2,502			Age of Living 26·6				Births 1 in 36		
St. Mary, Newington. Population 54,607.	Gentry . .	79	13	92	6	62	50	..	..	1 in 46	338
	Tradesmen	75	64	139	23	50	26	12	13		
	Artisans, &c.	325	420	745	162	52	22	10	17		
	Undescribed	75	76	151	31	59	30	3	9		
	Paupers .	64	6	70	1	60	55	2	..		
	Totals and	618	579	1,197	223	..	..	..	..	..	..
	Averages .	..	..	..	..	55	28	7	11	..	..
		No. of Births 1,620			Age of Living 26·8				Births 1 in 34		
St. Pancras. Population 129,711.	Gentry . .	151	49	200	15	61	45	1	..	1 in 43	934*
	Tradesmen	349	286	635	108	50	27	12	12		
	Artisans, &c.	622	674	1,296	287	47	22	15	17		
	Undescribed	269	354	623	199	55	23	7	16		
	Paupers .	232	49	281	47	61	50	1	..		
	Totals and	1,623	1,412	3,035	656	..	.	..	..	..	..
	Averages .	..	..	..	..	53	27	9	12	..	..
		No. of Births 3,264			Age of Living 26·10				Births 1 in 40		

* Mr. Worrell, the Registrar of the Gray's Inn-lane District:—"To ascertain and compare the healthy with the unhealthy parts of my district, I have placed against each street the whole number of deaths from all causes during the last five years. I have taken the number of deaths from a population of 5000, resident in

District.	Class.	Number of Deaths of each Class. Adults.	Children under 10.	Total.	Deaths from Epidemic.	Average Age at Death of all who die above 21.	Average Age at Death, including Children.	Years' Average premature loss of Life by Deaths above Age of 21.	Deaths of all Classes.	Proportionate Number of Deaths to Population.	Excess in Number to Deaths above a Healthy standard.
		No.	No.	No.	No.	Years.	Years.	Years.	Years.	No.	No.
West London. Population 33,629.	Gentry . .	12	4	16	2	58	38	5	1	1 in 27	387
	Tradesmen	83	103	186	41	49	22	13	17		
	Artisans, &c.	393	381	774	186	46	22	16	17		
	Undescribed	149	17	166	23	47	38	15	1		
	Paupers .	99	16	115	26	64	55	..	..		
	Totals and	736	521	1,257	278	..	..	..	..	..	..
	Averages .	..	..	..	..	49	27	13	12	..	..
		No. of Births 698			Age of Living 27·7			Births 1 in 48			
Whitechapel. Population 71,758.	Gentry . .	17	4	21	..	58	47	4	..	1 in 31	768
	Tradesmen	142	130	272	42	50	26	12	13		
	Artisans, &c.	741	637	1,378	261	48	25	14	14		
	Undescribed	116	313	429	107	58	16	4	23		
	Paupers .	166	37	203	38	63	61	..	..		
	Totals and	1,182	1,121	2,303	448	..	..	..	..	..	..
	Averages .	..	..	..	..	51	26	11	13	..	..
		No. of Births 2,103			Age of Living 26·2			Births 1 in 34			
St. James, Westminster. Population 37,407.	Gentry . .	27	9	36	1	57	42	5	..	1 in 50	251
	Tradesmen	68	66	134	23	51	26	11	13		
	Artisans, &c.	161	190	351	59	46	21	16	18		
	Undescribed	52	83	135	28	52	20	10	19		
	Paupers .	81	15	96	7	58	49	4	..		
	Totals and	389	363	752	118	..	..	..	..	..	..
	Averages.	..	..	..	..	51	26	11	13	..	..
		No. of Births 844			Age of Living 28·2			Births 1 in 44			
East London. Population 39,655.	Gentry .	14	3	17	..	63	50	..	.	1 in 36	372
	Tradesmen	134	164	298	76	53	23	9	16		
	Artisans, &c.	265	391	656	145	51	21	11	18		
	Undescribed	36	10	46	1	50	38	12	1		
	Paupers .	87	11	98	18	65	57	..	..		
	Totals and	536	579	1,115	240	..	..	..	..	..	..
	Averages.	..	..	..	..	54	26	8	13	..	..
		No. of Births 1,235			Age of Living 27·0			Births 1 in 32			

what I consider healthy streets; and I have also taken the number of deaths from a population of 5000, resident in streets which I consider unhealthy. The 5000 occupying the best houses are composed of merchants, professional gentlemen, and the richer class of tradesmen; they occupy 728 houses, containing about 7800 good rooms; the streets are wide, well drained, and have a plentiful supply of water. The 5000 occupying the unhealthy streets are composed of the lower class of tradesmen, journeymen mechanics, labourers, and costermongers; they occupy 434 houses, containing about 2800 rooms, the best of which are little better than the worst of the 7800 before mentioned; the streets are mostly confined, the drains in a bad state, and in many places the accumulation of filth renders the atmosphere foul, whilst the supply of water is not very good. The number of deaths which I find in the healthy streets during five years, amongst a population of 5000, amounts to 325; and, during the same period, amongst 5000 occupying the unhealthy streets I find 613. No doubt many of the residents in the best houses go into the country, with the view of benefitting their health, and there die; but certain it is that many more of the poorer classes die in the workhouses and hospitals—so that, no doubt, amongst a certain number of poor, at least two deaths occur to one amongst the same number of rich. Having been a collector of rates upwards of 25 years, and, as a house agent, having had much to do with the letting of houses, I am thoroughly acquainted with the neighbourhood; and, having taken an active part in collecting and distributing voluntary contributions in times of distress and severe weather, I have been enabled to judge of the condition of the poor

District.	Class.	Number of Deaths of each Class. Adults.	Children under 10.	Total.	Deaths from Epidemic.	Average Age at Death of all who die above 21.	Average Age at Death, including Children	Years' Average premature loss of Life by Deaths above Age of 21.	Deaths of all Classes.	Proportionate Number of Deaths to Population.	Excess in Number of Deaths above a Healthy standard
		No.	No.	No.	No.	Years.	Years.	Years.	Years.	No.	No.
Holborn. Population 39,720.	Gentry .	36	9	45	3	58	47	4	..	1 in 36	367
	Tradesmen	144	164	308	75	52	24	10	15		
	Artisans, &c.	231	353	584	149	50	19	12	20		
	Undescribed	21	6	27	2	54	41	8	..		
	Paupers .	155	32	137	35	60	46	2	..		
	Totals and	537	564	1,101	264	..	..	..	..	..	..
	Averages.	..	..	..	..	53	26	9	13	..	..
		No. of Births		969	Age of Living		27·2		Births 1 in 41		
Shoreditch. Population 83,552.	Gentry .	63	23	86	14	65	47	..	..	1 in 38	732
	Tradesmen	153	150	303	63	47	23	15	16		
	Artisans, &c.	498	802	1,300	271	51	19	11	20		
	Undescribed	150	75	225	34	57	37	5	2		
	Paupers .	234	49	283	56	57	46	5	..		
	Totals and	1,098	1,099	2,197	438	..	..	..	..	..	..
	Averages.	..	..	..	..	54	26	8	13	..	..
		No. of Births		3,058	Age of Living		26		Births 1 in 27		
City of London. Population 55,967.	Gentry .	32	12	44	3	63	43	..	..	1 in 50	403
	Tradesmen	247	244	491	84	48	23	14	16		
	Artisans, &c.	213	270	483	94	50	22	12	17		
	Undescribed	77	29	106	15	58	39	4	..		
	Paupers .	..	..	..	..	..	..	..	..		
	Totals and	569	555	1,124	196	..	..	..	..	..	..
	Averages.	..	..	..	..	51	25	11	14	..	..
		No. of Births		1,210	Age of Living		27·7		Births 1 in 46		
St. John & St. Margaret, Westminster. Population 56,718.	Gentry .	37	14	51	9	55	42	7	..	1 in 39	521
	Tradesmen	82	102	184	47	46	20	16	19		
	Artisans, &c.	458	581	1039	264	48	21	14	18		
	Undescribed	38	24	62	9	56	49	6	..		
	Paupers .	97	19	116	17	57	46	5	..		
	Totals and	712	740	1,452	346	..	..	..	..	..	..
	Averages.	..	..	..	..	50	25	12	14	..	..
		No. of Births		1,730	Age of Living		26·11		Births 1 in 33		

and their habitations, and I have always observed that sickness prevails much more in places where sewers and drains are bad than in other parts where the inhabitants are equally poor, but have more wholesome houses to live in. Any suggestion here as to remedy may, probably, be considered out of place, but having had much experience as a Commissioner of Pavements, as well as in several offices of local management during the last 25 years, and having given much attention to the subject (an evil which, in my opinion, affects the metropolis to an extent little imagined), I have no doubt as to the means of remedy, and improvement in the local administration being perfectly easy and effectual."

In another classification he arranges, from descriptions of streets with nearly equal population, the highest in each class; the relative proportions, and average ages of deaths, are ascertained to be as follows:—

	Population.	Deaths.	Average Age of Death.
Class 1	1432	97	35
Class 2	1465	119	32
Class 3	1448	157	25
Class 4	1386	200	21

The above statement proves that, out of a population of 1432 occupying the best houses, 95 deaths occurred within five years, 29 of which at and under five years of age; and that out of a population of 1386, occupying the worst houses, the whole number of deaths are 189, 104 of which at and under five years of age.

District.	Class.	Number of Deaths of each Class. Adults.	Children under 10.	Total.	Deaths from Epidemic.	Average Age at Death of all who die above 21.	Average Age at Death, including Children.	Years' Average premature loss of Life by Deaths above Age of 21.	Deaths of all Classes.	Proportionate Number of Deaths to Population.	Excess in Number of Deaths above a Healthy standard.
		No.	No.	No.	No.	Years.	Years.	Years.	Years.	No.	No.
St. James, Clerkenwell. Population 56,709.	Gentry	52	15	67	8	60	46	2	..	1 in 43	474
	Tradesmen	99	109	208	50	49	23	13	16		
	Artisans, &c.	324	533	857	183	50	19	12	20		
	Undescribed	82	17	99	6	59	44	3	..		
	Paupers	76	14	90	2	60	50	2	..		
	Totals and	633	688	1,321	249	..	..	..	..	..	..
	Averages.	..	..	..	..	53	25	9	14	..	..
		No. of Births 1,771			Age of Living 25·11			Births 1 in 32			
St. George in the East. Population 41,351.	Gentry	18	3	21	..	63	54	..	..	1 in 36	408
	Tradesmen	66	72	138	29	49	23	13	16		
	Artisans, &c.	313	481	794	158	46	18	16	12		
	Undescribed	62	14	76	3	60	46	2	..		
	Paupers	93	14	107	14	61	52	1	..		
	Totals and	552	584	1,136	204	..	..	..	..	..	..
	Averages.	..	..	..	..	51	25	11	14	..	..
		No. of Births 1,404			Age of Living 26·6			Births 1 in 29			
St. Giles and St. George. Population 54,250.	Gentry	66	32	98	15	60	40	2	..	1 in 36	528
	Tradesmen	119	114	233	44	52	26	10	13		
	Artisans, &c.	280	584	864	221	51	17	11	22		
	Undescribed	42	20	62	9	53	35	9	4		
	Paupers	208	34	242	53	54	46	8	..		
	Totals and	715	784	1,499	342	..	..	..	..	..	..
	Averages.	..	..	..	..	53	25	9	14	..	..
		No. of Births 1,622			Age of Living 27·9			Births 1 in 33			
Strand. Population 43, 894.	Gentry	47	21	68	8	59	40	3	..	1 in 41	413
	Tradesmen	129	132	261	58	51	25	11	14		
	Artisans, &c.	299	382	681	178	48	61	14	18		
	Undescribed	26	19	45	4	55	28	7	11		
	Paupers	15	5	20	..	65	49	..	..		
	Totals and	516	559	1075	248	..	..	..	..	..	..
	Averages.	..	..	..	..	51	24	11	15	..	..
		No. of Births 957			Age of Living 27·3			Births 1 in 46			
Lambeth. Population 115,883.	Gentry	141	64	205	19	58	37	4	2	1 in 46	979
	Tradesmen	340	452	792	174	50	21	12	18		
	Artisans, &c.	452	704	1,156	245	49	19	13	20		
	Undescribed	113	68	181	27	59	35	3	4		
	Paupers	173	38	211	37	56	44	6	..		
	Totals and	1,219	1,326	2,545	502	..	..	..	..	..	..
	Averages.	..	..	..	..	52	24	10	15	..	..
		No. of Births 3,782			Age of Living 26·2			Births 1 in 31			

District.	Class.	Number of Deaths of each Class. Adults.	Children under 10.	Total.	Deaths from Epidemic.	Average Age at Death of all who die above 21.	Average Age at Death, including Children.	Years' Average premature loss of Life by Deaths above Age of 21.	Deaths of all Classes.	Proportionate Number of Deaths to Population.	Excess in Number of Deaths above a Healthy standard.
		No.	No.	No	No.	Years.	Years	Years.	Years	No.	No.
St. George, Southwark. Population 46,622.	Gentry .	32	9	41	5	61	45	1	..		
	Tradesmen	66	53	119	18	54	30	8	9		
	Artisans, &c.	371	591	962	248	53	20	9	19	1 in 39	492
	Undescribed	35	15	50	10	50	30	12	9		
	Paupers .	22	6	28	2	58	45	4	..		
	Totals and	526	674	1,200	283	..	..	..	..	..	..
	Averages.	..	..	..	..	53	23	9	16	..	..
		No. of Births 1,574			Age of Living 26·5			Births 1 in 30			
St. Luke. Population 49,982.	Gentry .	21	6	27	3	56	38	6	1		
	Tradesmen	62	52	114	17	49	25	13	14		
	Artisans, &c.	391	569	960	306	49	20	13	19	1 in 40	538
	Undescribed	85	49	134	17	58	35	4	4		
	Paupers .	..	..	..	..	..	..	..	..		
	Totals and	559	676	1,235	343	..	..	..	..	..	..
	Averages.	..	..	..	..	50	22	12	17	..	..
		No. of Births 2,271			Age of Living 25·11			Births 1 in 22			
Bermondsey. Population 34,847.	Gentry .	3	5	8	..	51	20	11	19		
	Tradesmen	66	59	125	16	48	25	14	14		
	Artisans, &c.	202	373	575	144	51	18	11	21	1 in 42	364
	Undescribed	24	26	50	6	45	21	17	18		
	Paupers .	62	14	76	15	57	47	5	..		
	Totals and	357	477	834	181	..	..	..	..	..	..
	Averages.	..	..	..	..	51	22	11	17	..	..
		No. of Births 1,151			Age of Living 24·7			Births 1 in 30			
Bethnal Green. Population 74,087.	Gentry .	39	11	50	4	61	46	1	..		
	Tradesmen	110	136	246	56	53	24	9	15		
	Artisans, &c.	468	874	1,342	369	51	18	11	21	1 in 41	794*
	Undescribed	69	19	88	6	57	44	5	..		
	Paupers .	76	19	95	19	65	49	..	..		
	Totals and	762	1,059	1,821	454	..	..	..	..	..	..
	Averages.	..	..	..	..	54	22	8	17	..	..
		No. of Births 2,674			Age of Living 25·2			Births 1 in 28			

* Mr. George Reynolds, the Registrar of the Church District, in answer to the question, In what parts of your district has the number of deaths registered in the years 1838, 1839, 1840, 1841, and 1842, been the greatest in proportion to the population? states, "In Beckford-row, Elliot-row, Alfred-place, Camden-gardens, Pitt-street, Pott-street, Camden-street, Wolverley-street, New York-street, and Punderson gardens." And state generally the condition of those unhealthy streets, courts, and houses, as to drainage, supplies of water, cleanliness.—"The places I have named are entirely without drainage. Supply of water, one hand-cock to many houses. Cleanliness, great want of." Name any particular streets or parts which, according to the facts that have fallen under your notice, appear to you to be healthy, and with reference to the points adverted to in the preceding question, compare the healthy with the unhealthy portions of your district.—"My entire district, I think, would be in a much more healthy condition had we efficient drainage; instead of which, even this, the main road of the parish, is without a sewer, notwithstanding the Commissioners of Sewers have been repeatedly memorialized, and the following fact brought under their notice, that the cellars of the houses do not extend to the depth of 3 feet 6 inches below the level of the carriage-road, and yet there is an average of 18 inches of water during the greater part of the winter season; that many persons are obliged to use the pump for many hours daily to preserve their property." He gives the following letter from a medical officer of great experience:—

District.	Class.	Number of Deaths of each Class. Adults.	Children under 10.	Total.	Deaths from Epidemic.	Average Age at Death of all who die above 21.	Average Age at Death, including Children.	Years' Average premature loss of Life by Deaths above Age of 21.	Deaths of all Classes.	Proportionate Number of Deaths to Population.	Excess in Number of Deaths above a Healthy standard.
		No.	No.	No.	No.	Years.	Years.	Years.	Years.	No.	No.
St. Saviour's. Population 32,980.	Gentry .	9	1	10	1	52	47	10	..		
	Tradesmen	45	43	88	17	52	26	10	13		
	Artisans, &c.	250	248	498	93	45	22	17	17	1 in 36	422
	Undescribed	89	198	287	65	51	15	11	24		
	Paupers .	23	9	32	4	59	40	3	..		
	Totals and Averages.	416	499	915	180	..	..	..	..	..	..
		..	..	..	..	48	21	14	18	..	..
		No. of Births 1,145			Age of Living 27·3			Births 1 in 29			

"289, Bethnal-green-road, October 31st, 1842.

"Dear Reynolds,—As you are aware, I have attended many of the inhabitants of this road and its vicinity, and I do not hesitate to say that many of their diseases are to be attributed entirely to the want of drainage. They are,—1st, febrile diseases; 2nd, diseases of the respiratory organs; 3rd, nervous diseases; 4th, diseases of the digestive organs; and lastly, cachectic diseases. Of the first kind, the very numerous cases of fever in the undrained districts that occur shortly after the autumnal rains, I take in the light of cause and effect. Rheumatism (acute and chronic) are the result of sleeping in houses, the walls of which absorb the surface water, and elevate it by capillary attraction to the height of two or three feet. The diseases of the respiratory and digestive organs are above the average number, and are attributable to the same cause. The nervous diseases I attribute to the poisonous gases exhaled from putrefying matter. They are—1st, epilepsy. In two families this disease attacked every one of the younger branches of the family, and they were cured by removal to another district. Many cases of spasm of a particular muscle, as one or two of the muscles of the face, the large muscle in front of the neck, and even some of the muscles of the arm; also frequent cases of the most inveterate hysteria have been temporarily relieved by removal, and have returned again on their return home. Of the cachectic diseases, some are produced, others aggravated, by this cause. Scrofula is of this latter description. The cases of the children in your own family show that it is impossible to prevent suppuration, when the patient is constantly breathing a humid atmosphere. This has also been the case with one of your immediate neighbours. That form of scrofula, termed *tabes mesenterica*, I think, is, in many cases, brought on entirely by the same cause. Want of time prevents my extending the example of diseases attributable to this cause.

"I am, dear Reynolds, yours truly, "T. Taylor."

On a Method recently proposed for conducting Inquiries into the Comparative Sanatory Condition of various Districts, with Illustrations, derived from numerous places in Great Britain at the period of the last Census. By F. G. P. Neison, F.L.S., &c.

[*Read before the Statistical Society of London, January* 15*th*, 1844.]

The present contribution has been made in consequence of the discussion which followed the reading of Mr. Chadwick's paper, at the last meeting of this Society. A new method of measuring the comparative value of life in various districts, was proposed in that communication, in the following terms: "If the ages of any class, or of the general population, living in any district, and the ages of those who die were reduced to the simplest proportions; that is, if the total years of age whether of the living or dying, were divided by the total number of individuals from which the returns were made, the public would be enabled to make comparisons between district and district, and to judge of the relative degrees of pressure in each, of the causes of mortality." It is also stated "That the average ages of death are found to maintain a comparatively steady course, always nearest to the actual condition of the population, and give the most sure indications." And that "the chief test of the pressure of the causes of mortality is the duration of life in years; and whatever age may be taken as the standard of the natural age or the

average age of the individual in any community may be taken to correct the returns of the proportions of death in that same community."*

It appears to me that there will be little difficulty in showing that the method proposed is fallacious in principle, and that its practical application to vital statistics will produce contradictory results; and that consequently it cannot be used as a test of the sanatory condition of a community. In order to be borne out in this statement, I will refer chiefly to the examples given in the paper in question.

That the average age of those who die in one community cannot be taken as a test of the value of life when compared with that in another district is evident from the fact that no two districts or places are under the same distribution of population as to ages; that is to say, compare any one district with another, for example, district A with district B, and it will be found that while in A there is perhaps 15 per cent. of the population under 5 years of age; in B there is not more than 8 per cent. under the same age, and also while A may have 10 per cent. of its population above 60 years of age, B may have only 4 per cent.

The ratio of the population, at the respective quinquennial periods to the whole population, as enumerated at the census of 1841, has been calculated for the various hundreds, town-parishes, and country-parishes of Middlesex; and it is not found that any two of them agree in the proportionate distribution of population according to ages. The same thing has also been done for the principal towns and counties of England, and like results have been obtained. It will likewise appear that the calculation has been extended to Scotland, Ireland, and America, with results confirming the same fact, that no two places, districts, or counties are uniform in the distribution of the population over the various periods of life. This is an important fact and on it the whole question turns.

Tables are here prepared (Tables A) for the following districts of the metropolis, namely, Bethnal-green, St. George's Hanover-square, Marylebone, Clerkenwell, St. Giles and St. George's Bloomsbury, and Kensington; and it will be seen on inspection that a more irregular distribution of population as to ages could not have existed, even if they had been purposely arranged with a view not to resemble each other. From this Table it appears, that while in Bethnal-green district there is 14·5 per cent. of the population under 5 years of age; in St. George's Hanover-square there is only 8·6 per cent. Again, while in St. George's Hanover-square, there is 14·2 per cent. alive between the ages of 20 and 25, in Bethnal-green there is but 8·9 per cent. The same Table also shows the actual number of the population for quinquennial periods, in the six districts in question; one column shows the proportion which the number alive at each period of life bears to the total population; in a separate column the number of deaths at each quinquennial period of

* The writer has here quoted the terms of an Essay annexed to the Supplemental Sanatory Report on the Practice of Interment in Towns (pp. 243–245), from the printed sheets of which the author of the paper which has given rise to the present, read nearly the whole of his communication to the Society. No other copy of that paper being left with the Society, or communicated to it, previous to the writer being called upon to read the present imperfect essay to the Society, he necessarily adopted for quotation the terms contained in the Sanatory Report, which had appeared in the interim. F. G. P. N.——The terms above quoted from the Supplemental Sanatory Report are not precisely the same that appear in the preceding paper, at pp. 6–12; nor are those quoted at p. 43 anywhere to be found in it.—Ed.

life is set forth from the actual mortality of the year 1840—1; the next column shows the per centage of deaths in each period of life to the whole deaths; and in the last column is inserted the rate of mortality per cent. to the population alive at each quinquennial period of life.

Similar Tables (Tables B) have been prepared, entering into the same details, for the Metropolis, Liverpool, Sheffield, Manchester, Birmingham, Leeds, city of Exeter, counties of Devon, Essex, Suffolk, Norfolk, and Hereford, and here we find similar results to those found in the metropolitan districts; for while the town of Sheffield has 14·4 per cent. of the population alive under 5 years of age, the city of Exeter has only about 11 per cent.; and again, while in the counties of Essex, Suffolk, Norfolk and Hereford there is on an average 8·864 per cent. of the population above 60 years of age, in the towns of Liverpool, Sheffield, Manchester, Birmingham, Leeds, and Exeter there is only 4·6 per cent. alive above the same age. These irregularities will be found to prevail in any other period of life that may be selected. Take the decennial term from 20 to 30, and it will appear that in the town of Liverpool it includes 22·3 per cent. of the whole population, while in the counties of Devon, Essex, Suffolk and Norfolk, it includes only 16·4 per cent. Let us also compare different places as to one quinquennial period only of life, say that from 60 to 65; and in the counties of Devon, Hereford, and Norfolk, the ratio will be found to range from 3 to 3·6 per cent. of the whole population; but in Liverpool, Leeds, Manchester, and Sheffield, the proportion alive at that period will be found to be 2 per cent. and under.

An inspection of these Tables will, I am satisfied, be sufficient to show that there is not to be found any such thing as a uniformity in the distribution of population over the various periods of life in any two places, or indeed any approximation to it. But to more completely bear out this statement, and place its truth on a still more extended basis, other Tables have been prepared, (Tables C.) to represent, at the period of last census, the population of the Metropolis, Liverpool, Sheffield, Manchester, Birmingham, Leeds, Carlisle, Exeter; the counties of Devon, Essex, Suffolk and Norfolk; and also the districts in the metropolis of St. George's Hanover-square, and Bethnal-green: in part resembling the Tables already mentioned but with this distinction, that the grouping of the population represents the period of life under 5 *years of age;* that from 10 to 40; from 15 to 30; from 40 to 60 years of life; and also that above 60 years of age. This was done in order to meet the objection that in quinquennial periods of life, the irregularities which exist may compensate each other. Such however will not be found to hold good, for even on taking those more extended periods of life, the same irregularities manifest themselves. For example, taking a period of 30 years of life, namely, that from 10 to 40, it will appear that in St. George's Hanover-square, there is 61·9 per cent. of the whole population alive, while in the county of Norfolk there is only 49·2 per cent.; and also by viewing the period from 40 to 60 it is seen that while in Carlisle there is 18 per cent. of the population alive, in Liverpool there is only 14·9 per cent. In fact, over those greater periods of life, none of the places mentioned will be found to resemble each other in the distribution of the population according to ages, and I believe it is not possible to find any two places that will show a near approximation in this respect.

It may be right here to state that none of the districts referred to have been selected from a knowledge that they would show the extremes of the principle; the short period of time allowed to prepare this paper, and the labour required to determine such places, necessarily precluded the possibility of doing so. They were selected either from their note as sites of manufacturing industry, or from their agricultural importance. It would, however, be interesting to know what are the places forming the extremes of the scale, and important to determine satisfactorily the cause of such difference.

Enough, I hope, has been said to show that a marked difference exists in the distribution of the population of various places over the several periods of life. And the next point of the question is to determine whether this circumstance will affect the *calculation of the average age* at which the respective members of an entire community die, and if so, to what extent.

Before entering on this individual point it may be necessary to make one remark, namely, that, as shown in the tables already mentioned, containing the actual results of mortality for 1840—1; the rate of mortality at one quinquennial period of life differs widely from that at another, ranging *from* 25 *per cent. and upwards to half per cent.* and under.

I have no doubt, therefore, but it will appear evident that if any one locality had an excess of population at that period where the mortality was 25 per cent., and a deficiency of population at that period where the rate of mortality was only half per cent., that the average amount of mortality, the number of deaths, and consequently the average age at which death happened, would differ widely from that of another locality in which the order of population was exactly reversed; or, to quote from the paper in question, "*One adult of* 50 *years added* to the living is equal to the addition of 50 infants, and so with the average ages at death."* Consequently taking this position, and referring to the population of Bethnal-green, where there is 14·5 per cent. of the population under 5 years of age, and comparing it with St. George's Hanover-square, having only 8·6 per cent. alive at the same period, it is very clear that we should expect an excess of deaths among children in Bethnal-green. In conjunction with this let us view the population of both districts at the period 20—25 of life, where the mortality of both districts is nearly the same, somewhere about one-half per cent., and we shall see that the order of the respective populations is very nearly inverted, namely—

Bethnal-green.	*St. George's Hanover-square.*
From 20—25 = 8·9 per cent.	From 20—25 = 14·2 per cent.
From 5 and under = 14·5 per cent.	From 5 and under = 8·6 per cent.

It must therefore follow in viewing the population of Bethnal-green at those two periods of life, and comparing the average age at which death has taken place therein, with the average age at which death has happened in the same periods of life in St. George's Hanover-square, that the average age of death in the former must be less than in the latter, even allowing that the populations in both places are influenced at the respective periods of life by precisely the same intensity of mortality; or, in other words, the average age at death in Bethnal-green would be lower than that in St. George's Hanover-square, for two

* Supplemental Sanatory Report, p. 253.

reasons; first, from there being an increase of lives at the younger age, where the mortality is great; and, second, from there being a deficiency of lives at the older age where the mortality is small. And so also in the same manner would the result follow if every other period of life were kept in view. In order to illustrate this part of the question, a series of 18 tables (Tables D and E), has been prepared, which I will presently explain; but in the first place make one or two allusions to the results. And to carry out our remarks on Bethnal-green; it is found that over the whole population of that district the average age at death is 25·80 years; but in the district of St. George's Hanover-square, the average age at death of the whole population is 31·23 years; and therefore by the application of the new method proposed to view such questions, we ought at once to conclude that the latter district is in a superior sanatory condition to the former, inasmuch as the population one with another enjoys 5·42 years more of life. But it has been shown that there is a very different distribution of the population of those districts, and possibly this may account for the difference in the results. Now if the proposed method be really a good and sufficient test of the comparative healthiness of two districts, it should be equally applicable to any particular district, no matter what change takes place in its population, provided that change is a usual or a natural one in the course of society. Then in order to get quit of the objection arising from Bethnal-green having a differently distributed population to that of St. George's Hanover-square, we shall suppose that the population of Bethnal-green is actually transferred to St. George's, Hanover-square, but influenced by exactly the same rate of mortality as that which prevails in St. George's Hanover-square, and which would be in no way altered as to its healthiness or unhealthiness, but have simply suffered a change in population, and in that respect placed under the same circumstances as the other. The result would be that the average age at death in St. George's Hanover-square, would be reduced from 31·23 years to 27·25, so that in fact the inhabitants of St. George's Hanover-square, instead of enjoying 5·42 years of life more than those of Bethnal-green would only experience 1·45 years more than the other, as shown when the necessary correction is made for the distribution of population.

In other districts of the metropolis, such as Marylebone, when placed under the same circumstances as to population, life on the average from being 3·32 years better than in Bethnal-green, as would appear by the proposed new method, is actually shown to be 1·28 years worse.

Without entering any further into the question proposed it would thus appear fallacious; for it has been shown that there exists a diversity of distribution in the population of different districts. It has likewise been shown that a change in the population without any change in the rate of mortality will actually produce by the application of the method proposed an opposite result, and consequently it cannot be applied as a good and sufficient test of the sanatory condition of different districts.

Of the series of tables before alluded to, six (Tables D) relate to different districts of the metropolis, namely, Bethnal-green, St. George's Hanover-square, Marylebone, Clerkenwell, St. Giles's and St. George's Bloomsbury, and Kensington. These tables show for each district the actual number of persons who have died in the year 1840—1, at each quinquennial period of life, the number of years of life which each of

these classes experienced, also the total number of deaths and the total number of years of life; and the division of the one by the other will show the average age at death. Those tables also contain the number of deaths that would have happened at each period of life, according to the actual rate of mortality in the respective districts, provided the population had been the same as that of Bethnal-green; also the number of years of life which they would have enjoyed, and likewise the total of these. We will select one case as an example of the use to which they may be applied. In the district of St. Giles's and St. George's Bloomsbury, the actual number of deaths which took place was 1,473, and the total number of years of life which they experienced was 41,502, producing an average of 28·17 years to each person; but the rate of mortality to the same district would, with the population of Bethnal-green, have produced 2,489 deaths and 60,597 years of life, being an average to each person of 24·34 years. And thus, instead of being more healthy than Bethnal-green, as would appear by the method in question, it is actually less so by 1·46 years to each person, which is confirmed by comparing its mortality per cent. at each quinquennial period, when it is found that out of 17 of the 20 periods the mortality is greater in St. Giles's and St. George's Bloomsbury than in Bethnal-green; but if we had nothing else to rely on than the new method proposed it would appear quite otherwise.

Having said this much, I now beg to submit the following table, in which is given the average age at death in the six districts of the metropolis referred to, according to the actual results, and also what would have been the result provided they had been under the Bethnal-green standard of population; some other details are also inserted in the table which will be presently noticed.

Effects of the irregularities of distribution of Population according to Ages in the under-mentioned Districts, arranged to show the fallacy of proposing the average Age at Death of the whole Population, as a test of the Sanatory Condition of the Localities.

District.	Average Age at Death.		Number out of which one will die.		Mortality per Cent.	
	Actual.	Transferred.	Actual.	Transferred.	Actual.	Transferred.
Bethnal-green	25·80	..	42·02	..	2·38	..
St. George's Hanover-square	31·23	27·25	46·86	37·64	2·13	2·65
St. George's Hanover-square, exclusive of Hospital . .	31·29	28·13	57·75	44·47	1·73	2·50
Marylebone	29·12	24·52	37·55	33·55	2·66	2·98
Clerkenwell	26·38	24·84	38·45	34·79	2·60	2·87
St. Giles and St. George's Bloomsbury	28·17	24·34	36·85	29·76	2·72	3·35
Kensington	32·39	26·71	44·94	43·64	2·22	2·29
Liverpool	20·67	22·25	35·36	32·04	2·82	3·12

I would also direct attention to 12 other tables (Tables E), representing at quinquennial periods of life the number of deaths for the year 1840—1 in the Metropolis, Liverpool, Sheffield, Manchester, Birmingham, Leeds, city of Exeter, and counties of Devon, Essex, Suffolk, Norfolk, and Hereford; showing the years of life experienced at the same periods,

and the totals of these. The same tables also show what would have been the deaths in each of these places provided they had had the same population as the metropolis, and also the years of life which they would have experienced.

On this series of tables is founded another table, which I would beg also to submit to consideration. It exhibits the average age at death in the preceding 12 principal towns and counties, also what would have been the average age at death if placed under the same population as the metropolis.

Effects of the irregularities of distribution of Population according to Ages in the under-mentioned Districts, arranged to show the fallacy of proposing the average Age at Death of the whole Population, as a Test of the Sanatory Condition of a Locality.

District.	Average Age at Death.*		Number out of which one will die.		Mortality per Cent.	
	Actual.	Transferred.	Actual.	Transferred.	Actual.	Transferred.
Metropolis	29·06	..	39·10	..	2·55	..
Liverpool	20·67	25·07	35·36	34·92	2·82	2·58
Sheffield	23·19	28·14	28·51	29·28	3·50	3·75
Manchester	22·86	27·37	40·76	39·93	2·45	2·50
Birmingham	23·70	26·82	48·65	50·63	2·06	1·97
Leeds	22·51	26·01	33·59	35·44	2·95	2·82
City of Exeter	30·56	26·24	39·88	41·79	2·50	2·39
Devon	37·97	31·48	57·14	66·57	1·75	1·50
Essex	30·82	28·55	51·12	56·34	1·95	1·77
Suffolk	33·24	29·51	48·96	54·57	2·04	1·83
Norfolk	31·80	26·71	48·82	56·38	2·04	1·77
Hereford	38·42	30·54	57·86	68·49	1·72	1·46

This table contains some interesting results, and I beg to cite two cases. The average age at death in the metropolis is 29·06 years, but in the town of Sheffield it is only 23·19 years; however, if Sheffield were placed under the population of the metropolis the average age at death would be raised to 28·14 years, approaching close to the metropolis. The other case I will select is the county of Hereford, and I do so because it has been given in the paper before alluded to, and contrasted with the metropolis and other places on account of the supposed superior value of life there, and its very healthy condition. It then appears that the average age at death in Hereford is 38·42 years, and hence the population would seem to enjoy nearly 10 years more of life each than the inhabitants of the metropolis; but bring the population of Hereford to the same standard as that of the metropolis, and it will seem that the average age at death is only 30·54 years, coming very close to that of the metropolis. So that after all, the distinction between the two places is not great. In the metropolis 6·01 per cent. of the population is above 60, but in Hereford 10·1 per cent. is above that age.

Another method of viewing this question would be to apply the same rate of mortality to different populations. The populations of the same place at different periods will be found to change in their distribution over the various periods of life, in the same way that distinct districts, as before noticed, do at the same period of time.

* As explained in a former paragraph, in reference to the preceding table, these columns are formed from Tables E. as that was formed from Tables D.

The population of England and Wales in 1821 differed in its distribution in many respects from the population of 1841; and if the method proposed were a fitting test for the health of the population, the results obtained in the following manner should agree; namely, apply the rate of mortality which actually prevailed in England and Wales in 1840–1 to the population as enumerated in 1841, and also apply the same rate of mortality at the respective periods of life, to the population as it existed at the census of 1821. This calculation will be found carried out in the following table; and it appears that in 1841, 335,106 deaths occurred, (which agrees to a unit with the actual deaths in that year when the deaths at ages not specified are added,) and the total years of life experienced was 10,462,274, giving an average of 29·462 years. But in 1821, 266,446 deaths would have happened, experiencing 6,632,303 years of life or an average age at death of 24·892 years.

Mortality in England in the Years 1841 *and* 1821, *calculated for the Population of those Years according to the Actual Mortality of* 1840-1.*

Ages.	1841			1821		1841	1821
	Population.	Deaths in 1840-1.	Mortality per Cent. by 1840-1.	Population.	Deaths that would have happened by rate of 1840-1.	Years of Life.	Years of Life.
Under 5	2,099,152	140,089	6·673	1,781,787	118,845	350222·5	297112·5
5—10	1,898,432	19,906	1·049	1,565,713	16,439	149295·	123292·5
10—15	1,726,162	9,727	·563	1,334,278	6,471	121587·5	80887·5
15—20	1,581,355	12,282	·776	1,189,148	9,276	208794·	162330·
20—30	2,823,721	27,048	·993	1,885,924	18,671	676200·	466775·
30—40	2,044,459	22,511	1·101	1,414,563	15,574	787885·	545090·
40—50	1,521,473	21,001	1·380	1,118,750	15,439	945045·	694755·
50—60	1,022,735	21,616	2·113	789,992	1,667	1188880·	91685·
60—70	697,035	28,381	4·071	546,946	22,261	1844765·	846965·
70—80	343,031	30,748	8·964	272,719	24,435	2306100·	1822625·
80—90	94,125	18,807	19·980	75,006	14,986	1598595·	1273810·
90–100	7,932	2,876	36·259	6,299	2,284	273220·	216980·
100 and upwards	249	114	45·783	215	98	11685·	9996·
Total	15,859,861	355,106	..	11,981,340	266,446	10462274·	6632303·5

	1841	1821
Average Age at Death	29·462	24·892
Number out of which one will die annually . .	44·634	44·967
Deaths per cent. annually	2·225	2·224

Now, if any value is to be attached to the method proposed, those results ought to have agreed; for in both instances the same rate of mortality influenced the two populations.

We will take another example of viewing the question by this method; as a very curious result is arrived at, and the case is furnished in the same paper in which is also given the proportionate population at each

* Column 2nd in the above table is taken from the Census for 1841 ("Age Abstract"), pages 458, 459; and columns 3rd and 5th will be found at page 80 of the Fourth Annual Report of the Registrar-General. The other columns are, of course, deduced from them.

interval of age to every 10,000 of the population of England and Wales and the United States of America, and it is remarked on the figures when tabulated, "that whilst in England there are 5,025 persons between 15 and 50 who have 3,610 children, or persons under 15, in America there are 4,789 persons living, between 15 and 50 years of age, who have 4,371 children dependent upon them. In England there are in every 10,000 persons 1,365 who have obtained above 50 years' experience; in America there are only 830." This clause seems to me to contain the essence of the whole objection to the method in question.

The average age at death is calculated in the succeeding table, according to the rate of mortality prevalent in this country in 1840–1, and it appears that the average age at death in England is 29·420 years, corresponding with a former result; while with the same rate of mortality applied to the American population the average age at death is only 20·398, showing a difference of no less than nine years; so that if we were to be guided by the test proposed, and only knew the results of this case and nothing of the cause producing them, we should unhesitatingly pronounce public health in America to be at a very low ebb. This case of itself should however warn us to be cautious in receiving results so obtained, and guard us against opinions founded on them.

Population of England and Wales, and also of the United States of America, for every 10,000 *of the inhabitants of the two countries.*

Ages.	England and Wales.			U. S. America.		England and Wales.	U. S. America.
	Numbers alive to every 10,000.	Mortality per Cent. 1840–1.	Number of Deaths	Numbers alive to every 10,000.	Number of Deaths by preceding Mortality.	Years of life enjoyed in England and Wales.	Years of life experienced in U. S. America.
Under 5	1,324	6·673	88·31	1,744	116·32	220·775	290·80
5—10	1,197	1·049	12·57	1,417	14·74	94·275	110·55
10—15	1,089	·563	6·10	1,210	6·78	76·250	84·75
15—20	997	·776	7·78	1,091	8·40	136·150	142·80
20—30	1,780	·993	17·62	1,816	17·98	440·500	449·50
30—40	1,289	1·101	14·19	1,160	12·76	496·650	446·60
40—50	959	1·380	13·23	732	10·10	595·350	454·50
50—60	645	2·113	13·61	436	9·20	748·550	506·00
60—70	440	4·071	17·91	245	9·97	1164·150	648·05
70—80	216	8·964	19·35	113	10·12	1451·250	759·00
80—90	59	19·980	11·79	32	6·39	1002·150	543·15
90 and upwards	5	36·259	1·81	4	1·45	171·950	137·75
Total	10,000	..	224·27	10,000	224·21	6598·000	4573·45

	England and Wales.	America.
Average Age at Death	29·420	20·398
Number out of which one will die annually	44·554	44·601
Mortality per Cent. annually	2·242	2·242

In the above table it may be curious to observe that in the two populations of England and Wales and the United States of America, as therein given, the number of deaths is exactly equal, and still the average age at death over the whole populattion of the one differs by upwards of nine years from that of the other.

It may also be remarked, that if more limited periods of life be compared, the error in the method proposed will, to a considerable extent, disappear; for example, the average age at death, in the above table, for the population above 20 years of age, would be—

For England and Wales	55·43
And for United States of America . . .	51·22
Showing an error of	4·21 years.

The following table will show the comparative uniformity between the deaths above 20 years of age and those at all ages:—

Districts.	Average Age of Deaths at all Ages.		Average Age of Deaths above 20.	
	Actual Population.	Corrected Population.	Actual Population.	Corrected Population.
Bethnal-green	25·80	25·80	54·68	54·68
St. George's Hanover-square .	31·23	27·25	49·93	54·97
Marylebone	29·12	24·52	52·19	54·13
Metropolis	29·06	29·06	53·36	53·36
Sheffield	23·19	28·14	50·95	52·66
Hereford	38·42	30·54	59·23	49·64

Like irregularities and errors will be found in the following table, calculated for the city of Glasgow:—

Mortality in Glasgow from the average of the Five Years 1836—40, *applied to the Population of* 1821 *for that city, and also to the Population of* 1841.*

Ages.	Ratio of Mortality.		1821			1841		
	Number out of which one will die.	Rate per Cent.	Population.	Number that would have died.	Years of life experienced.	Population.	Number that would have died.	Years of life experienced.
Under 5	10·473	9·548	21,250	2,029	5072·5	35,336	3,375	8437·5
5—10	70·605	1·416	17,514	249	1867·5	29,348	417	3127·5
10—15	129·850	·770	16,727	129	1612·5	28,753	221	2762·5
15—20	97·495	1·025	15,883	164	2870·0	30,566	312	5304·0
20—30	91·214	1·095	25,912	282	7050·0	60,998	665	16625·0
30—40	48·858	2·046	18,216	373	13055·0	39,542	811	28385·0
40—50	31·888	3·136	14,644	460	20700·0	24,817	779	35055·0
50—60	27·275	3·670	9,092	334	18370·0	13,008	477	26235·0
60—70	16·183	6·179	5,096	315	20475·0	7,815	483	31395·0
70—80	7·158	13·967	2,108	294	22050·0	2,998	419	31425·0
80—90	3·863	25·886	544	141	11985·0	703	182	15470·0
90—100	2·461	40·756	57	23	2185·0	63	26	2470·0
100 and upwards	1·000	100·000	..	..	..	18	18	1845·0
Total	..	..	147,043	4,793	127292·5	273,965	8,185	208536·5

	1821	1841
Average at Death	26·34	25·50
Number out of which one will die annually . .	30·67	33·47
Mortality per Cent. annually	3·25	2·97

* Column 2nd is deduced from the average mortality of the five years 1836—40, as given in the City of Glasgow Bills of Mortality; and columns 4th and 7th are taken from the Enumeration Abstracts for 1821 and 1841. The other columns are, of course, deduced from these.

In the same paper the "average age at death" in the four counties of *Down, Wexford, Kilkenny*, and *Monaghan*, was given, being the four counties which, according to the Census for Ireland, contained the lowest proportion of *mud-hovels;* and compared with the "average age at death" in the four counties of *Mayo, Clare, Kerry*, and *Cork*, in which the highest proportion of mud-hovels was found to exist.

By the following table it will be seen that in the four *lowest* counties the average age at death is 34·54 years, and in the four *highest* only 26·70 years; and hence it was concluded that the effect of the greater prevalence of mud-hovels in the latter was to deprive each member of that community of 7·84 years of life on an average one with another: but it will also appear that when the four latter counties is placed under the same distribution of population, that the actual difference is only ·95 of a year. And hence appears the fallacy of the proposed test:—

*Mortality of Down, Wexford, Kilkenny, and Monaghan, the four Counties in Ireland in which the average Proportion of Mud-hovels is lowest, compared with Mayo, Clare, Kerry, and Cork, the four Counties where the average Proportion of Mud-hovels is highest.**

Ages.	4 Counties where lowest.			4 Counties where highest.			Years of life experienced			
	Population in 1841.	† Number of Deaths 1840.	Mortality per Cent. for 1840.	Population in 1841.	† Number of Deaths 1840.	Mortality per Cent for 1840.	In the 4 Counties of the lowest average.	In the 4 Counties of the highest average.	What would have been the result if the Population in the 4 lowest had been the same as in the other.	
Under 5	139,570	4,313	3·09	270,534	12,020	4·37	10792·5	30050·0	6141·0	12282
5—10	118,473	611	52	236,795	1,434	·60	4582·5	10755·0	710·0	5325
10—15	110,417	428	·39	207,265	849	·41	5350·0	10612·5	452·7	5659
15—20	97,234	629	·65	205,976	1,106	·54	11007·5	18802·0	525·1	8925
20—30	166,539	1,360	·82	301,212	2,488	·82	34000·0	62200·0	1360·6	34015
30—40	107,408	1,015	·95	200,954	2,080	1·03	35525·0	72800·0	1106·0	38710
40—50	86,693	1,103	1·27	153,852	1,910	1·42	49635·0	85950·0	1231·0	55395
50—60	59,980	1,468	2·45	126,888	2,920	2·31	80740·0	160600·0	1385·5	7620
60—70	32,031	1,479	4·62	51,329	2,091	4·69	96135·0	135915·0	1502·2	97643
70—80	14,190	1,442	10·16	16,666	1,627	9·76	108150·0	122025·0	1385·0	103875
80—90	3,593	607	16·89	3,367	578	17·17	51455·0	49130·0	616·9	52436
90—100	556	172	30·93	899	220	24·5	16340·0	20900·0	156·2	12939
100 & upwds.	23	23	100·00	42	42	100·0	2357·5	4305·0	23·0	23575
Total	946,707	14,650	..	1,752,308	29,365	..	506070·0	784044·5	16375·0	458399

	Four Counties where average proportion of mud-hovels is lowest.	Four Counties where average proportion of mud-hovels is highest.
Average Age at Death	34·54	26·70
Average Age at Death, if the population were under the same distribution in the four lowest as in the four highest counties	27·65	27·65
Error of the Test proposed . . .	6·89	
Actual differenee		·95

* The facts forming this table are taken from the Census for 1841 for Ireland, The items composing columns 2nd, 3rd, 5th, and 6th, will be found under their appriate heads in the same document. The other columns are, of course, deduced from these.

† In these columns the deaths for one year only are inserted. To have taken the average for the whole 10 years given in the Census would have involved an error, the population undergoing considerable increase within that period; and the deaths being only guessed at, or approximated to, forms an additional reason for not including the remote years; and the deaths being given for a fractional part only of 1841, therefore 1840 was selected.

With regard to the method in question, we are placed in this position. If the same rate or intensity of mortality be supposed to prevail in any two places, the results may, as seen, differ widely. Again, if we consider the actual rate of mortality peculiar to each district to exist, the results become equally distorted. And it is, therefore, clear that the method in question does not give any indication of the sanatory condition of a community; for it has appeared that the results derived from its application may produce a difference in the *average age at death* in two districts when the rate of mortality is the same, and *vice versâ*, the average age at death may correspond, while different rates or degrees of mortality prevail in the districts compared.

The same remarks which have been brought to bear against the average age at death as a test of the comparative sanatory condition of various districts, will be found to be equally applicable against two other tests commonly resorted to by public writers on vital statistics, viz., "the number out of which one death takes place in the community," and also the "rate of mortality per cent. over the whole population."

The extent of the error to which both of those supposed tests are liable will be seen by comparing the columns of the foregoing tables; and on reflection it will be found that precisely the same causes which produced the fallacious results in the "average age at death," do equally affect those two methods, and that they are on that account to be as little depended on as a test of the health of the population.

The objections which have been brought against the method of taking the *average age at death* as a test of the healthy condition of the population, for the same reasons upset another proposed test in the paper in question. It is said, "that in the less healthy districts the proportions of births to the whole population is greater than in the more healthy districts." This proposition may be either true or otherwise, and it certainly would be important to know that a sickly and depraved community possessed a greater reproductive power than a healthy and robust people; but no facts with which I am familiar tend to lead my mind to such a conclusion. It is possible to find another solution of the increased ratio of births to the total population than simply the unhealthy nature of the district, and one example will show that other explanations may in some cases be found:—

It is stated that the births in the metropolis are in the ratio of 1 to 37 to the whole population, but that in Hereford the ratio of births is only 1 in 44; and hence it is concluded that the sanatory condition of the metropolis is inferior to that of Hereford.

Let us see, then, what is the actual ratio of the generative population, as it may be called, of the metropolis, to that of Hereford; and taking the population from 20 to 40 years of age, which may be admitted to represent the mean productive force in the two localities, it appears that in the metropolis there is 36·33 per cent. of the population included in that period, while in the county of Hereford there is only 28·39 per cent.

It is, then, fair to state that the births in the metropolis should bear the same ratio to its reproductive population, which the births in Hereford bear to its reproductive numbers; and carrying out this calculation, it follows that the births in the metropolis should be 1 in 34·38 to the whole population, but the actual ratio is 1 in 37. Hence we find that the

metropolis instead of having a considerably increased ratio of births, as would appear by the figures, has in reality a deficiency of births.

Time will not admit of entering further into this part of the question at present; but I may state, that in all inquiries into facts connected with vital statistics, either with regard to deaths or births, the actual section of the population from which the results are derived must be kept in view. It may be further stated, that several districts have been compared with respect to the number of births, and in general the number of births to the whole population is in the inverse ratio to each other of the generative population.

One very interesting and important part of the inquiry instituted in the paper in question relates to the comparative healthiness of various classes and trades. This attempt is of paramount value to society, and too much praise cannot be bestowed on so excellent a design; but, unfortunately, it is subject to the very same objections as the other inquiries alluded to.

A series of 32 tables is given in that paper, representing each of the districts of the metropolis. In these tables the following classification is adopted, namely, "Gentry," "Tradesmen," "*Artizans*," "*Undescribed*" and "*Paupers*," and the number of deaths which happened among the adults of each class and among the children under 10 years of age is given; and also the average age at death of each class. Now it is evident that these tables would only be useful, provided that the children alive in each class bore the same ratio to the adult population in it. These numbers not being given, the record of deaths cannot be depended upon. And if we only inspect the results inserted in the table, strong reason will be found to doubt the existence of a uniform distribution of the living population; for in 22 of the 32 districts examined, it appears that there is an excess of the deaths of children over the adults in the class designated artizans, and taking the totals of these 22 districts, it is found that the deaths of children amount to 11,241, while those of the adults are only 8,095. But, on the other hand, taking the class called "*Gentry*," it is found that there is a deficiency of the deaths of children in 31 of the districts, and the totals amount to 527 deaths of children, while the deaths of adults are as much as 1,718. It is evident that those startling discrepancies must be attributed to some other cause than differences of sanatory condition.

Vital statistics should hold no mean place in the political and social economy of the country; but I am satisfied that unless more correct methods of inquiry be adopted than many of those hitherto in use, the public will become impregnated with many vitiated views, as to the influence of the habits and practices of society on the value of life.

It will at once be seen, that so far as vital statistics relates to disease, the distribution of population according to age must form an important feature in every careful inquiry. To give a single illustration of this, it may be mentioned, that the population above 60 years of age in the counties of Hereford, Essex, Suffolk, and Norfolk is 8·846 per cent. of the whole; but the population above the same age in the towns of Liverpool, Sheffield, Manchester, Birmingham, Leeds, and Exeter, is only 4·6 per cent., and, consequently, the deaths from paralysis and diseases peculiar to old age ought to have nearly doubled the ratio to the whole population in the former that it has in the latter.

The same remarks apply to the proportionate number of marriages in a community; the numbers who can read and write, the degree of crime; and, in fact, to all questions whether "*vital*" or "*commercial*" which are brought to bear on the general population.

Ample means are available to illustrate all those cases under a variety of positions, and to show the necessity which exists for a most careful analysis of the whole living population before drawing any collateral conclusions.

But as there is no need to enter further into the subject at present, I beg to submit the present contribution to the scrutiny of the Society, and shall be happy to find that it does in any way interest the present meeting.

For sake of reference it may be mentioned, that all the facts employed in this paper, unless otherwise stated, are taken from the Census for 1841, and the Fourth Annual Report of the Registrar-General, viz. that for 1840–1.

In Tables A. and B., columns 2nd are taken from the "Age Abstract" for the Census for 1841, and the items will be there found under their appropriate "headings." Columns 4th will be found, in their appropriate places, in the "Age Abstract" of the Fourth Report of the Registrar-General. The other columns are, of course, deduced from these.

Table C. is formed from the "Age Abstract" of the Census for 1841; and in Tables D. and E., the column "Number Dying," under the head "Actual Results," is composed of the same numbers as those forming the respective columns in Tables A. and B., and obtained from the same source. The remaining columns are, of course, deduced according to the method set forth in this paper.

Throughout this paper no method has been proposed for conducting correct inquiries into the comparative sanatory condition of different districts; still such method may be readily inferred from what has been herein stated.

All the calculations have been made independent of other results; and, in some instances, slight corrections would be necessary to render the results perfect; but as these would, in many instances, involve very great labour, and the nature of the paper did not strictly require them, they have been omitted. The object contemplated in this paper is to illustrate a principle, and not to collect a series of statistical facts for their intrinsic value.

TABLES A.

BETHNAL GREEN.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths	
— 5	10,739	14·4949	850	48·8160	7·9150
5—10	9,180	12·3906	76	3·4222	·8278
10—15	8,006	10·8055	38	2·1542	·4746
15—20	7,096	9·8779	37	2·0975	·5214
20—25	6,579	8·8799	38	2·1542	·5670
25—30	5,829	7·8676	51	2·8911	·8749
30—35	5,749	7·7597	51	2·8911	·8871
35—40	4,490	6·0603	56	3·1746	1·2072
40—45	4,385	5·9186	47	2·6644	1·0715
45—50	2,955	3·9885	66	3·7415	2·2335
50—55	2,995	4·0424	74	4·1950	4·5012
55—60	1,644	2·2189	67	3·7981	3·5672
60—65	1,835	2·4767	64	3·6281	3·4877
65—70	1,042	1·4064	64	3·6281	6·1425
70—75	879	1·1891	68	3·8548	7·7360
75—80	366	·4928	47	2·6644	12·8415
80—85	173	·2335	39	2·2108	22·5423
85—90	71	·0958	22	1·2471	30·9859
90—95	21	·0283	6	·3401	28·5714
95–100	4	·0054	2	·1133	50·0000
100	. .	. .	. .	. .	. .
Unknown	50	. .	1	. .	. .
Totals .	74,088	. .	1,764	. .	. .

ST. GEORGE'S HANOVER SQUARE.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths.	
— 5	5,738	8·6346	463	32·6516	8·0690
5—10	4,591	6·9085	55	3·8787	1·1979
10—15	4,148	6·2420	28	1·9746	·6750
15—20	6,168	9·2817	36	2·5387	·5836
20—25	9,440	14·1728	68	4·7954	·7203
25—30	8,675	13·0540	78	5·5007	·8991
30—35	7,513	11·3057	64	4·5134	·8518
35—40	5,091	7·6610	78	5·5007	1·5321
40—45	4,930	7·4188	85	5·9943	1·7241
45—50	2,883	4·3384	66	4·6544	2·2787
50—55	2,711	4·0794	77	5·4301	2·8402
55—60	1,275	1·9186	55	3·8787	4·3137
60—65	1,469	2·2105	61	4·3018	4·1525
65—70	649	·9766	55	3·8787	8·4745
70—75	619	·9314	58	4·0901	9·3699
75—80	233	·3506	51	3·6219	21·8884
80—85	124	·2046	20	1·4111	14·7058
85—90	48	·0722	15	1·0580	31·2500
90—95	10	·0150	4	·2822	40·0000
95–100	2	·0030	1	·0705	50·0000
100	. .	. .	. .	. .	. .
Unknown	124	. .	. .	. .	. .
Totals .	66,453	. .	1,418	. .	. .

TABLES A.—*continued.*

MARYLEBONE.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths	
— 5	14,419	10·4292	1,433	38·9508	9·9382
5—10	12,147	8·7920	192	5·2188	1·5808
10—15	10,969	7·9339	65	1·0328	·5939
15—20	11,931	8·6356	72	1·5493	·6034
20—25	16,332	11·8200	155	4·2131	·9490
25—30	15,245	11·0089	142	3·8597	·9314
30—35	13,967	10·1093	154	4·1859	1·1026
35—40	9,770	7·0715	117	3·1793	1·1975
40—45	10,224	7·4001	156	4.2543	1·5258
45—50	5,988	4·3341	173	4·5953	2·8891
50—55	6,161	4·4593	162	4·3032	2·6294
55—60	2,939	2·1272	141	3·8197	3·0270
60—65	3,440	2·4993	182	4·9170	5·2907
65—70	1,707	1·2937	135	3·6695	7·9086
70—75	1,540	1·1146	149	4·0490	9·6753
75—80	684	·4950	130	3·5336	18·9708
80—85	384	·2779	66	1·7939	17·1875
85—90	116	·0839	29	·7882	25·0000
90—95	44	·0318	17	·4620	38·6463
95-100	8	·0057	6	·1630	75·0000
100	4	·0028	3	·0815	75·0000
Unknown	145	. .	. .	. .	. .
Total .	138,164	. .	3,679	. .	. .

CLERKENWELL.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths.	
— 5	6,822	11·992	698	47·473	10·230
5—10	5,508	9·704	74	5·010	1·343
10—15	5,013	9·038	19	1·286	·379
15—20	5,718	10·074	28	1·395	·489
20—25	6,313	11·123	39	2·640	·618
25—30	5,579	9·829	38	2·572	·681
30—35	5,290	9·320	45	3·046	·850
35—40	3,735	6·530	54	3·656	1·445
40—45	3,727	6·566	52	3·520	1·395
45—50	2,407	4·240	43	2·911	1·786
50—55	2,270	3·990	56	3·791	2·467
55—60	1,237	2·179	46	3·114	3·718
60—65	1,361	2·397	68	4·603	4·996
65—70	666	1·173	48	3·249	7·207
70—75	620	1·092	56	3·791	9·032
75—80	284	·500	53	3·588	18·661
80—85	129	·227	33	2·234	25·581
85—90	47	·082	21	1·422	44·680
90—95	11	·019	4	·027	36·363
95-100	. .	. .	1	·006	100·000
100	. .	. .	. .	. .	. .
Unknown	19	. .	1	. .	. .
Totals .	56.756	. .	1,477	. .	. .

TABLES A.—*continued.*

ST. GILES AND ST. GEORGE'S BLOOMSBURY.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths	
— 5	5,610	10·333	640	43·360	11·408
5—10	4,710	8·675	67	5·149	1·613
10—15	4,287	7·896	16	1·080	1·485
15—20	4,811	8·861	28	1·897	·582
20—25	6,265	11·539	36	2·439	·574
25—30	5,689	10·478	44	2·981	·773
30—35	5,714	10·524	58	3·929	1·015
35—40	3,861	7·111	63	4·268	1·631
40—45	4,182	7·702	57	3·861	1·362
45—50	2,322	4·276	56	3·794	2·356
50—55	2,595	4·779	58	3·929	2·225
55—60	1,126	2·074	42	2·845	3·730
60—65	1,379	2·539	92	6·233	6·671
65—70	579	1·066	64	4·336	11·050
70—75	536	·990	55	3·726	10·261
75—80	236	·434	53	3·590	22·457
80—85	126	·233	33	2·235	26·190
85—90	30	·055	3	·020	10·000
90—95	8	·014	6	·040	65·321
95–100	2	·003	2	·013	100·000
100	. .	. .	. .	. .	. .
Unknown	224	. .	3	. .	. .
Totals .	54,292	. .	1,476	. .	. .

KENSINGTON.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths.	
— 5	13,134	11·422	966	37·764	7·354
5—10	11,608	10·097	120	4·691	1·010
10—15	11,051	9·613	38	1·486	·344
15—20	10,326	8·981	57	2·233	552
20—25	11,990	10·429	72	2·814	·600
25—30	10,799	9·393	72	3·792	·666
30—35	10,052	8·744	97	3·792	·966
35—40	7,310	6·358	83	3·245	1·135
40—45	7,606	6·616	92	3·596	1·209
45—50	4,977	4·239	97	3·792	1·948
50—55	4,941	4·298	90	3·518	1·821
55—60	2,766	2·406	120	4·691	4·338
60—65	3,440	2·992	119	4·652	3·459
65—70	1,766	1·536	130	5·117	7·361
70—75	1,594	1·386	138	5·395	8·657
75—80	716	·621	124	4·848	13·756
80—85	418	·363	79	3·088	18·899
85—90	130	·113	45	1·763	34·614
90—95	51	·044	14	·547	27·450
95–100	8	·007	3	·117	37·500
100	3	·001	2	·078	100·000
Unknown	272	. .	. .	. .	. .
Totals .	114,958	. .	2,558	. .	. .

TABLES B.

METROPOLIS.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths.	
— 5	221,813	11·8380	19,519	40·6849	8·799
5—10	185,318	9·8974	2,194	4·5731	1·183
10—15	169,282	9·0345	789	1·6445	·466
15—20	172,042	9·0954	1,074	2·2386	·624
20—25	206,096	10·9996	1,632	3·4017	·791
25—30	182,470	9·7385	1,718	3·5809	·941
30—35	170,440	9·0964	1,789	3·7289	1·049
35—40	121,810	6·5010	1,900	3·9603	1·559
40—45	125,261	6·6851	1,788	3·7268	1·427
45—50	79,560	4·2559	1,897	3·9540	2·384
50—55	80,486	4·2955	1,992	4·1519	2·474
55—60	41,891	2·2357	1,817	3·7873	4·337
60—65	48,890	2·6092	2,288	4·7690	4·679
65—70	24,968	1·332	1,978	4·1229	7·922
70—75	21,763	1·161	2,081	4·3375	9·562
75—80	9,699	·518	1,707	3·5580	17·599
80—85	5,084	·271	1,003	2·0906	19·728
85—90	1,621	·0865	539	1·1234	33·251
90—95	477	·0254	160	·3358	33·543
95-100	115	·00613	52	·1084	45·217
100	24	·00128	9	·0188	37·500
Unknown	4,566	. .	50	. .	. .
Totals	1,873,676	. .	47,976	. .	. .

LIVERPOOL.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths.	
— 5	37,804	13·1955	4,261	52·4808	11·271
5—10	29,153	10·4129	448	5·5177	1·536
10—15	27,246	9·5102	149	1·8352	·550
15—20	26,765	9·3423	158	1·9460	·590
20—25	33,460	11·6792	275	3·3871	·821
25—30	30,538	10·6593	294	3·6211	·962
30—35	28,181	9·8366	308	3·7935	1·092
35—40	18,356	6·4072	319	3·9290	1·737
40—45	18,176	6·3443	296	3·6457	1·628
45—50	9,966	3·4786	262	3·2269	2·628
50—55	9,691	3·3826	251	3·0915	2·590
55—60	4,776	1·6670	200	2·4576	4·187
60—65	5,591	1·9515	261	3·2146	4·668
65—70	2,585	·9023	174	2·1437	6·731
70—75	2,090	·7295	157	1·9177	7·511
75—80	933	·3256	142	1·7489	15·219
80—85	522	·1822	87	1·0715	16·666
85—90	153	·05340	44	·5419	28·758
90—95	51	·01780	12	·1478	23·529
95-100	17	·005933	2	·0246	11·764
100	8	·002792	1	·0123	12·500
Unknown	425	. .	18	. .	. .
Totals	286,487	. .	8,119	. .	. .

TABLES B.—*continued.*

SHEFFIELD.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths.	
— 5	9,813	14·3935	1,163	48·6024	11·851
5—10	7,767	11·3909	115	4·8076	1·480
10—15	7,103	10·4170	66	2·7591	·929
15—20	6,929	10·1619	74	3·0936	1·067
20—25	7,045	10·3820	79	3·3026	1·121
25—30	6,119	8·7939	91	3·8043	1·487
30—35	5,447	8·0221	71	2·9682	1·303
35—40	4,236	6·2124	72	3·0100	1·699
40—45	3,937	5·7739	99	4·1387	2·514
45—50	2,646	3·8805	69	2·8846	2·607
50—55	2,438	3·5755	68	2·8428	2·789
55—60	1,448	2·1236	78	3·2608	5·386
60—65	1,371	2·0106	87	3·6371	6·345
65—70	807	1·1835	74	3·0936	9·169
70—75	577	·8462	72	3·0100	12·478
75—80	263	·3857	69	2·8846	26·235
80—85	135	·1979	23	·9615	17·037
85—90	33	·0484	18	·7525	54·545
90—95	6	·0088	2	·0836	33·333
95–100	4	·0059	1	·0418	25·000
100	. .	. .	. .	. .	. .
Unknown	62	. .	1	. .	. .
Totals	68,186	. .	2,392	. .	. .

MANCHESTER.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths.	
— 5	31,942	13·1549	2,917	48·9019	9·132
5—10	25,780	10·6099	304	5·0963	1·179
10—15	24,347	10·0209	119	1·9949	·488
15—20	24,401	10·0423	142	2·3805	·581
20—25	27,039	11·1280	188	3·1517	·695
25—30	23,065	9·4925	240	4·0234	1·040
30—35	22,301	9·1781	234	3·9228	1·049
35—40	15,317	6·3038	220	3·6881	1·436
40—45	15,192	6·2523	226	3·7887	1·487
45—50	9,068	3·7320	209	3·5037	2·304
50—55	8,883	3·6558	211	3·5373	2·377
55—60	4,436	1·8256	184	3·0846	4·147
60—65	5,132	2·0564	189	3·1684	3·682
65—70	2,335	·7609	181	3·0343	7·751
70—75	1,895	·7798	168	2·8164	8·865
75—80	828	·4290	111	1·8608	13·405
80—85	378	·1555	70	1·1735	18·518
85—90	130	·0534	34	·5699	26·153
90—95	32	·0166	12	·2011	37·500
95–100	9	·0037	2	.0335	22·000
100	6	·0025	. .	. .	. .
Unknown	467	. .	4	. .	. .
Totals	242.983	. .	5,965	. .	. .

TABLES B.—*continued.*

BIRMINGHAM.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths.	
— 5	25,461	13·9192	1,818	48·3520	7·140
5—10	21,066	11·5165	217	5·7712	1·030
10—15	19,153	10·4706	83	2·2074	·433
15—20	18,129	9·9108	100	2·6595	·551
20—25	19,529	10·6762	127	3·3776	·650
25—30	16,759	9·1619	117	3·1117	·698
30—35	14,758	8·0674	121	3·2180	·819
35—40	10,765	5·8850	135	3·5904	1·254
40—45	10,661	5·8282	131	3·4840	1·228
45—50	7,007	3·8306	123	3·2712	1·775
50—55	6,612	3·6146	110	2·9436	1·663
55—60	3,441	1·8811	93	2·7340	2·703
60—65	3,895	2·1293	123	3·2686	3·155
65—70	1,968	1·0758	122	2·2446	6·199
70—75	1,669	·9124	118	3·1383	7·070
75—80	849	·4641	99	2·6329	11·660
80—85	475	·2596	70	1·8617	14·730
85—90	137	·0749	37	·9840	27·007
90—95	52	·0284	11	·2925	21·154
95-100	12	·0066	2	·0532	16·668
100	1	·0005	2	·0532	100·000
Unknown	523	. .	1	. .	. .
Totals	182,922	. .	3,760	. .	. .

LEEDS.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths.	
— 5	21,615	14·2167	2,143	47·6539	9·914
5—10	18,053	11·8730	305	5·3873	1·689
10—15	16,720	10·9963	150	3·3347	·897
15—20	15,847	10·4232	143	3·1799	·902
20—25	15,305	10·0657	169	3·7580	1·104
25—30	12,910	8·4906	163	3·0624	1·626
30—35	11,848	7·7921	132	2·9352	1·114
35—40	9,081	5·9723	156	3·4689	1·717
40—45	8,773	5·7700	148	3·2910	1·687
45—50	5,839	3·8401	125	2·7796	2·140
50—55	5.360	3·5251	116	2·5795	2·164
55—60	3,198	2·1032	102	2·2681	3·189
60—65	3,183	2·0933	149	3·3299	4·681
65—70	1,726	1·1351	140	3·1131	8·111
70—75	1,306	·8589	124	2·7574	9·494
75—80	585	·3847	104	2·3216	17·777
80—85	315	·2071	69	1·5314	21·904
85—90	85	·0559	42	·9339	49·411
90—95	24	·0158	9	·2001	37·500
95-100	3	·0020	4	·0889	100·000
100	. .	. .	1	. .	. .
Unknown	278	. .	3	. .	. .
Totals	152,054	. .	4,497	. .	. .

TABLES B.—*continued.*

CITY OF EXETER.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths.	
— 5	3,503	11·1874	326	41·4331	9·306
5—10	3,275	10·4592	39	4·9681	1·190
10—15	2,990	9·5490	12	1·5286	·401
15—20	3,143	10·0375	15	1·9108	·477
20—25	3,112	9·9386	14	1·7834	·449
25—30	2,883	9·2073	29	3·6942	1·005
30—35	2,656	8·4823	32	4·0764	1·204
35—40	1,876	5·9913	21	2·6751	1·114
40—45	1,966	6·2789	34	4·3312	1·729
45—50	1,315	4·1996	31	3·9490	2·357
50—55	1,367	4·3657	23	2·9299	1·682
55—60	816	2·6060	15	1·9108	1·838
60—65	913	2·9158	30	3·7346	3·285
65—70	508	1·6223	33	4·2038	6·496
70—75	453	1·4466	44	5·6050	9·713
75—80	281	·8974	32	4·0764	11·387
80—85	141	·4503	27	3·4394	19·148
85—90	47	·1501	16	3·0382	34·042
90—95	17	·0543	7	·8917	41·176
95–100	3	·0096	2	·2547	66·666
100	. .	. .	3	·3821	. .
Unknown	47	. .	. .	. .	. .
Totals .	31,312	. .	785	. .	. .

DEVON.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths.	
— 5	67,111	12·5803	2,924	30·5985	4·356
5—10	64,560	12·1021	412	4·3114	·638
10—15	57,914	10·8562	207	2·1661	·357
15—20	52,973	9·9300	299	3·1289	·564
20—25	49,031	9·1911	356	3·7339	·726
25—30	39,934	7·4858	301	3·1498	·753
30—35	35,984	6·7453	287	3·0033	·797
35—40	27,854	5·2213	266	2·7835	·954
40—45	28,559	5·3535	279	2·9196	·976
45—50	22,778	4·2698	275	2·8777	1·207
50—55	23,705	4·4436	306	3·2021	1·294
55—60	15,522	2·9096	328	3·4323	2·113
60—65	16,443	3·0823	464	4·8555	2·821
65—70	10,522	1·9724	514	5·3788	4·885
70—75	9,680	1·8145	627	6·5613	6·477
75—80	5,338	1·0006	664	6·9485	12·439
80—85	3,209	·6015	578	6·0485	18·011
85—90	1,115	·2090	292	3·0556	26·188
90—95	310	·0581	124	1·2976	40·000
95–100	74	·0139	27	·2825	36·486
100	8	·0015	5	·0523	62·500
Unknown	836	. .	21	. .	. .
Totals .	533,460	. .	9,556	. .	. .

TABLES B.—*continued.*

ESSEX.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age	Number.		Number.	Per Centage to the Total Deaths.	
— 5	45,891	13·3025	2,337	34·9203	5·092
5—10	43,954	12·7410	503	7·5164	1·144
10—15	39,336	11·4024	238	3·5564	·605
15—20	33,159	9·6118	270	4·0346	·814
20—25	31,836	9·2283	282	4·2139	·885
25—30	25,827	7·4865	230	3·6369	·890
30—35	23,341	6·7659	208	3·1081	·891
35—40	17,859	5·1768	189	2·8242	1·058
40—45	19,112	5·5440	204	3·0480	1·067
45—50	14,531	3·3458	179	2·6748	1·231
50—55	14,047	3·2343	178	2·0598	1·267
55—60	8,436	2·4453	199	2·9737	2·358
60—65	9,612	2·7862	233	3·4817	2·424
65—70	6,127	1·7760	292	4·3624	4·765
70—75	5,272	1·5282	357	5·3347	6·771
75—80	2,878	·8343	307	4·5875	10·667
80—85	1,615	·4681	266	3·9748	16·470
85—90	521	·1510	151	2·2564	28·982
90—95	106	·0307	40	·5977	37·735
95-100	28	·0081	14	·2092	50·000
100	1	·0003	1	·0149	100·000
Unknown	1,490	. .	14	. .	. .
Totals .	344,979	. .	6.692	. .	. .

SUFFOLK.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths	
— 5	41,458	13·1900	2,185	33·7087	5·270
5—10	39,916	12·9640	364	5·6155	·911
10—15	36,160	11·4768	228	3·5174	·630
15—20	31,248	9·9178	278	4·2888	·889
20—25	28,458	9·0322	285	4·3967	1·001
25—30	22,684	7·1996	207	3·1934	·912
30—35	20,431	6·4845	228	3·5174	1·115
35—40	16,346	5·1880	174	2·6843	1·064
40—45	16,514	5·2413	177	2·7336	1·071
45—50	13,001	4·1260	148	2·2832	1·138
50—55	12,551	3.9835	179	2·7614	1·426
55—60	8,296	2·6330	201	3·1008	2·422
60—65	9,412	2·9872	247	3·8105	4·621
65—70	6,303	2·0005	275	4·2425	4·568
70—75	5,730	1·8186	354	5·4612	6·178
75—80	3,324	1·0550	358	5·5230	10·770
80—85	1,909	·6045	322	4·9676	16·867
85—90	745	·2365	183	2·8232	24·563
90—95	164	·0521	60	·5256	36·585
95-100	40	·0127	21	·3239	52·500
100	3	·0010	3	·0463	100·000
Unknown	380	. .	5	. .	. .
Totals .	315,073	. .	6,482	. .	. .

TABLES B.—*continued.*

NORFOLK.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths	
— 5	52,930	12·8265	3,144	37·0929	5·939
5—10	50,789	12·3077	553	6·5243	1·088
10—15	46,069	11·1639	289	3·4096	·627
15—20	41,161	9·9745	292	3·4450	·709
20—25	37,454	9·0762	298	3·5157	·795
25—30	29,697	7·1965	279	3·2916	·936
30—35	25,942	6·0303	227	2·6781	·910
35—40	22,797	5·5244	222	2·6191	·973
40—45	22,993	5·5719	216	2·5483	·939
45—50	17,890	4·3452	215	2·5365	1·201
50—55	16,731	4·0544	201	2·3712	1·200
55—60	10,657	2·5825	218	2·5719	2·045
60—65	12,391	3·0027	278	3·2798	2·243
65—70	8,845	2·1434	337	3·9759	3·810
70—75	7,573	1·8351	457	5·3917	6·345
75—80	4,478	1·0851	449	5·2973	10·026
80—85	2,508	·6077	388	4·5776	15·470
85—90	1,033	·2503	265	3·1264	25·654
90—95	288	·0698	107	1·2623	37·152
95-100	50	·0121	23	·2713	46·000
100	3	·0007	4	·0472	100·000
Unknown	385	. .	14	. .	. .
Totals .	412,664	. .	8,476	. .	. .

HEREFORD.

Living.		Per Centage to the Total Living.	Deaths.		Per Centage of the Deaths to the Living at the same Ages.
Age.	Number.		Number.	Per Centage to the Total Deaths.	
— 5	13,633	11·9713	520	26·3825	3·814
5—10	13,097	11·5007	95	4·8199	·725
10—15	12,292	10·7938	50	2·5367	·406
15—20	10,877	9·5512	72	3·6529	·661
20—25	9,904	8·6968	90	4·5662	·908
25—30	8,396	7·3709	85	4·3125	1·012
30—35	7,941	6·9731	63	3·1963	·793
35—40	6,100	5·3565	55	2·7904	·901
40—45	6,477	5·6875	66	3·3485	1·019
45—50	5,012	4·4011	49	2·4860	·977
50—55	5,109	4·4863	71	3·6022	1·389
55—60	3,428	3·0032	78	3·9573	2·275
60—65	4,137	3·6237	93	4·7184	2·247
65—70	2,370	2·0811	82	4·1603	3·459
70—75	2,224	1·9529	131	6·6463	5·917
75—80	1,320	1·1591	125	6·3419	9·469
80—85	920	·8078	131	6·6463	14·239
85—90	327	·2871	67	3·3992	20·489
90—95	106	·0931	25	1·2683	23·584
95-100	29	·0255	6	·3044	20·689
100	5	·0043	4	·2029	80·000
Unknown	174	. .	13	. .	. .
Totals .	113,878	. .	1,971	. .	. .

TABLES C.

METROPOLIS.			LIVERPOOL.			SHEFFIELD.		
Living.		Per Centage to the Total Living.	Living.		Per Centage to the Total Living.	Living.		Per Centage to the Total Living.
Age.	Number.		Age.	Number.		Age.	Number.	
5	221,813	11·8385	5	37,804	13·1957	5	9,813	14·3915
10—40	1,022,140	54·4997	10—40	164,546	57·4378	10—40	36,879	54·0859
15—30	560,608	29·9893	15—30	93,763	32·7284	15—30	20,693	29·4011
40—60	327,198	17·4629	40—60	42,609	14·8729	40—60	10,569	15·5002
60	112,641	6·0118	60	11,950	4·1712	60	3,196	4·6871
MANCHESTER.			BIRMINGHAM.			LEEDS.		
5	31,942	13·1459	5	25,461	13·9192	5	21,615	14·2157
10—40	136,470	56·1651	10—40	99,093	54·1728	10—40	81,711	53·7395
15—30	74,505	30·6630	15—30	54,417	29·7490	15—30	44,082	28·9917
40—60	37,579	15·4303	40—60	27,721	15·1547	40—60	23,170	15·2384
60	10,745	4·4221	60	9,066	4·9562	60	7,229	4·7543
CARLISLE.			EXETER.			COUNTY OF DEVON.		
5	2,838	12·3326	5	3,503	11·1871	5	67,111	12·5774
10—40	12,306	53·4764	10—40	16,660	53·2064	10—40	273,690	51·3046
15—30	6,862	29·8192	15—30	9,138	29·1837	15—30	141,938	26·5463
40—60	4,161	18·0820	40—60	5,564	13·2888	40—60	90,564	16·9767
60	1,460	6·3444	60	2,363	4·6627	60	46,691	8·7525
COUNTY OF ESSEX.			COUNTY OF SUFFOLK.			COUNTY OF NORFOLK.		
5	45,891	13·3025	5	41,458	13·1584	5	52,930	12·8264
10—40	171,663	49·7594	10—40	155,127	49·2357	10—40	203,120	49·2222
15—30	90,822	26·3267	15—30	82,390	26·1497	15—30	108,312	26·2435
40—60	56,146	16·2751	40—60	50,362	15·9843	40—60	68,271	16·[illegible]055
60	26,159	7·5827	60	27,627	8·7685	60	37,169	9·0055
ST. GEORGE'S HANOVER SQUARE.			BETHNAL GREEN.					
5	5,738	8·6345	5	10,739	14·4949			
10—40	41,035	61·8990	10—40	37,749	50·9515			
15—30	24,283	36·5404	15—30	19,504	26·3254			
40—60	11,799	17·7548	40—60	11,979	16·4692			
60	3,166	4·7643	60	4,391	6·0369			

TABLES D.

Actual Results.

BETHNAL GREEN.			ST. GEORGE'S HANOVER SQUARE.		MARYLEBONE.	
Ages.	Number Dying.	Years of Life.	Number Dying.	Years of Life.	Number Dying.	Years of Life.
5	850	2125	463	1157·5	1,433	3582·5
5 — 10	76	570	55	412·5	192	1440
10 — 15	38	475	28	350	65	812·5
15 — 20	37	647·5	36	630	72	1260
20 — 25	38	855	68	1530	155	3487·5
25 — 30	51	1402·5	78	2145	142	3905
30 — 35	51	1657·5	64	2080	154	5005
35 — 40	56	2100	78	2925	117	4387·5
40 — 45	47	1997·5	85	3612·5	156	6630
45 — 50	66	3135	66	3135	173	8217·5
50 — 55	74	3885	77	4042·5	162	8505
55 — 60	67	3852·5	55	3162·5	141	8107·5
60 — 65	64	4000	61	3812·5	182	11375
65 — 70	64	4320	55	3712·5	135	9112·5
70 — 75	68	4930	58	4205	149	10802·5
75 — 80	47	3642·5	51	3952·5	130	10075
80 — 85	39	3217·5	20	1650	66	5445
85 — 90	22	1925	15	1312·5	29	2537·5
90 — 95	6	555	4	370	17	1572·5
95 —100	2	195	1	97·5	6	585
100 & upwds. *	..	..	..	..	3	307·5
Total . .	1,763	45487·5	1,418	44295	3,679	107152·5

Results by the respective Rates of Mortality in each place if containing the same Population as Bethnal Green does.

BETHNAL GREEN.			ST. GEORGE'S HANOVER SQUARE.		MARYLEBONE.	
Ages.	Number Dying.	Years of Life.	Number Dying.	Years of Life.	Number Dying.	Years of Life.
5			867	2167·5	1,067	2667·5
5 — 10			110	825	145	1087·5
10 — 15			54	675	47	587·5
15 — 20			41	717·5	43	752·5
20 — 25			47	1057·5	62	1395
25 — 30			52	1430	54	1485
30 — 35			48	1560	63	2047·5
35 — 40			68	2550	54	2025
40 — 45			75	3187·5	67	2847·5
45 — 50			68	3230	85	4037·5
50 — 55			85	4462·5	79	4147·5
55 — 60			70	4025	50	2875
60 — 65			76	4750	97	6062·5
65 — 70			88	5940	82	5535
70 — 75			82	5945	85	6162·5
75 — 80			80	6200	69	5347·5
80 — 85			25	2062·5	30	2475
85 — 90			22	1925	18	1575
90 — 95			8	740	8	740
95 —100			2	195	3	292·5
Totals. .			1,968	53645	2,208	54145

* In this table, and in Table E, the number of deaths at "unknown" ages, or ages not specified, are omitted.

TABLES D.—*continued.*

Actual Results.

CLERKENWELL.			ST. GILES AND ST. GEORGE BLOOMSBURY.		KENSINGTON.	
Ages.	Number Dying.	Years of Life.	Number Dying.	Years of Life.	Number Dying.	Years of Life.
5	698	1745	640	1600	966	2415
5 — 10	74	555	67	502·5	120	900
10 — 15	19	217·5	16	200	38	475
15 — 20	28	490	28	490	57	997·5
20 — 25	39	877·5	36	810	72	1620
25 — 30	38	1045	44	1210	72	1980
30 — 35	45	1462·5	58	1885	97	3152·5
35 — 40	54	2025	63	2362·5	83	3112·5
40 — 45	52	2210	57	2422·5	92	3910
45 — 50	43	2042·5	56	2660	97	4607·5
50 — 55	56	2940	58	3045	90	4725
55 — 60	46	2645	42	2415	120	6900
60 — 65	68	4250	92	5750	119	7437·5
65 — 70	48	3240	64	4320	130	8775
70 — 75	56	4060	55	3987·5	138	10005
75 — 80	53	4107·5	53	4107·5	124	9610
80 — 85	33	2722·5	33	2722·5	79	6517·5
85 — 90	21	1837·5	3	262·5	45	3937·5
90 — 95	4	370	6	555	14	1295·5
95 —100	1	97·5	2	195	3	292·5
100 & upwds.	..	..	..	..	2	205
Totals . .	1,476	38940	1,473	41502·5	2,558	82870·5

Results by the respective Rates of Mortality in each place containing the same Population as Bethnal Green does.

CLERKENWELL.			ST. GILES AND ST. GEORGE BLOOMSBURY.		KENSINGTON.	
Ages.	Number Dying.	Years of Life.	Number Dying.	Years of Life.	Number Dying.	Years of Life.
5	1,098	2745	1,224	3060	789	1972·5
5 — 10	123	922·5	148	1100	93	697·5
10 — 15	30	375	118	1475	27	337·5
15 — 20	34	595	41	717·5	39	682·5
20 — 25	40	900	37	832·5	39	877·5
25 — 30	40	1100	45	1237·5	38	1045
30 — 35	49	1592·5	58	1885	55	1787·5
35 — 40	65	2437·5	73	2737	51	1912·5
40 — 45	61	2592·5	60	2550	53	2252·5
45 — 50	53	2517·5	79	3752·5	57	2707·5
50 — 55	74	3885	66	3465	55	2887·5
55 — 60	61	3507·5	61	3507·5	71	4082·5
60 — 65	92	5750	122	7625	62	3875
65 — 70	75	5062·5	115	7762·5	77	5197·5
70 — 75	79	5727·5	90	6525	76	5510
75 — 80	68	5720	82	6355	50	3875
80 — 85	44	3630	45	3712·5	33	2722·5
85 — 90	31	2712·5	7	612·5	25	2187·5
90 — 95	8	740	14	1295	6	555
95 —100	4	390	4	390	2	195
Totals . .	2,129	52902·5	2,489	60597	1,698	45330

TABLES E.

Actual Results.

Ages.	METROPOLIS. Number Dying.	METROPOLIS. Years of Life.	LIVERPOOL. Number Dying.	LIVERPOOL. Years of Life.	SHEFFIELD. Number Dying.	SHEFFIELD. Years of Life.	MANCHESTER Number Dying.	MANCHESTER Years of Life.
5	19,519	48797·5	4,261	10652·5	1,163	2907·5	2,917	7292
5 — 10	2,194	16455	448	3360	115	862·5	304	2280
10 — 15	789	9862·5	149	1862·5	66	825	119	1487
15 — 20	1,074	18795	158	2765	74	1295	142	2485
20 — 25	1,632	36720	275	6187·5	79	1777·5	188	4230
25 — 30	1,718	47245	294	8085	91	2502·5	240	6600
30 — 35	1,789	58142·5	308	10010	71	2307·5	234	7605
35 — 40	1,900	71250	319	11962·5	72	2700	220	8250
40 — 45	1,788	75990	296	12580	99	4207·5	226	9605
45 — 50	1,897	90107·5	262	12445	69	3277·5	209	9927
50 — 55	1,992	104580	251	13177·5	68	3570	211	11077
55 — 60	1,817	104477·5	200	11500	78	4485	184	10580
60 — 65	2,288	143000	261	16312·5	87	5437·5	189	11812
65 — 70	1,978	133515	174	11745	74	4995	181	12217
70 — 75	2,081	150872·5	157	11382·5	72	5220	168	12180
75 — 80	1,707	132292·5	142	11005	69	5347·5	111	8602
80 — 85	1,003	82747·5	87	7177·5	23	1897·5	70	5775
85 — 90	539	47162·5	44	3850	18	1575	34	2975
90 — 95	160	14800	12	1110	2	185	12	1110
95 —100	52	5070	2	195	1	97·5	2	185
100 & upwds.	9	922·5	1	192·5	..	..	..	..
Total .	47,926	1393805	8,101	167467·5	2,391	55470·5	5,961	136277

Results by the respective Rates of Mortality in each place, if containing the sar Population as the Metropolis does.

Ages.	METROPOLIS. Number Dying.	METROPOLIS. Years of Life.	LIVERPOOL. Number Dying.	LIVERPOOL. Years of Life.	SHEFFIELD. Number Dying.	SHEFFIELD. Years of Life.	MANCHESTER Number Dying.	MANCHESTER Years of Life.
5			24,998	62495	26,285	65712·5	20,252	50630
5 — 10			2,835	21262·5	2,743	20572·5	2,168	16260
10 — 15			931	11637·5	1,557	19462·5	813	10162
15 — 20			1,015	17762·5	1,824	31920	998	17465
20 — 25			1,690	38025	2,308	51930	1,422	31995
25 — 30			1,752	48180	2,701	74277·5	1,898	52195
30 — 35			1,858	60385	2,216	72020	1,773	57622
35 — 40			2,107	79012·5	2,059	77212·5	1,742	65325
40 — 45			2,029	86232·5	3,144	133620	1,854	78795
45 — 50			2,084	98990	2,069	98277·5	1,830	86925
50 — 55			2,084	109410	2,238	117495	1,908	100170
55 — 60			1,751	100682·5	2,254	129605	1,734	99705
60 — 65			2,278	142375	3,100	193750	1,799	112437
65 — 70			1,680	113400	2,287	154372·5	1,935	130612
70 — 75			1,634	118465	2,714	196765	1,928	139780
75 — 80			1,475	114312·5	2,544	197160	1,300	100750
80 — 85			847	69877·5	866	71445	941	77632
85 — 90			466	40775	884	77350	424	37100
90 — 95			112	10360	159	14707·5	179	16557
95 —100			13	1267·5	29	2827·5	25	2437
100 & upwds.			3	307·5	..	..	..	..
Total .			53,642	1345215	63,981	1800482·5	46,923	1284557

TABLES E.—*continued.*

Actual Results.

Ages.	BIRMINGHAM. Number Dying.	BIRMINGHAM. Years of Life.	LEEDS. Number Dying.	LEEDS. Years of Life.	CITY OF EXETER. Number Dying.	CITY OF EXETER. Years of Life.	DEVON. Number Dying.	DEVON. Years of Life.
5	1,818	4545	2,143	5357·5	326	815	2,924	7310
5 — 10	217	1627·5	305	2287·5	39	292·5	412	3090
10 — 15	83	1037·5	150	1875	12	150	207	2587·5
15 — 20	100	1750	143	2502·5	15	262·5	299	5232·5
20 — 25	127	2857·5	169	3802·5	14	315	356	8010
25 — 30	117	3217·5	166	4565	29	797·5	301	8277·5
30 — 35	121	3932·5	132	4290	32	1040	287	9327·5
35 — 40	135	5062·5	156	5850	21	787·5	266	9975
40 — 45	131	5567·5	148	6250	34	1445	279	11857·5
45 — 50	123	5842·5	125	5937·5	31	1472	275	13062
50 — 55	110	5775	116	6090	23	1207·5	306	16065
55 — 60	93	5307·5	102	5865	15	862·5	328	18860
60 — 65	123	7687·5	149	9312·5	30	1875	464	29000
65 — 70	122	8235·	140	9459	33	2227·5	514	34695
70 — 75	118	8555·	124	8990	44	3190	627	45457·5
75 — 80	99	7672·5	104	8060	32	2480	664	51460
80 — 85	70	5775·	69	5692·5	27	2227·5	578	47685
85 — 90	37	3237·	42	3675	16	1400	292	25550
90 — 95	11	1017·5	9	832·5	7	647·5	124	11470
95 —100	2	185·	4	370	2	195	27	2632·5
100 & upwds.	2	205·	1	102·5	3	307·5	5	512·5
Total .	3,759	89092	4,494	101166·5	785	23997	9,535	362117·5

Results by the respective Rates of Mortality in each place, if containing the same Population as the Metropolis does.

Ages.	BIRMINGHAM. Number Dying.	BIRMINGHAM. Years of Life.	LEEDS. Number Dying.	LEEDS. Years of Life.	CITY OF EXETER. Number Dying.	CITY OF EXETER. Years of Life.	DEVON. Number Dying.	DEVON. Years of Life.
5	15,882	39705	21,982	54995	20,629	51572·5	9,649	24122·5
5 — 10	1,909	14317·5	3,113	23347·5	2,205	16537·5	1,168	8760
10 — 15	728	9100	1,507	18837·5	677	8462·5	592	7400
15 — 20	946	16555	1,548	27090	809	14157·5	963	16852·5
20 — 25	1,340	39150	2,267	51007·5	907	20407·5	1,484	33390
25 — 30	1,259	34622·5	2,238	61545	1,825	50187·5	1,369	37647·5
30 — 35	1,381	44882·5	1,892	61490	2,045	66462·5	1,346	43745
35 — 40	1,523	57112·5	2,083	78112·5	1,352	50700	1,157	43387·5
40 — 45	1,528	64940	2,104	89420	2,154	91545	1,215	51637·5
45 — 50	1,408	66880	1,703	80920·5	1,870	88825	955	45632·5
50 — 55	1,336	70140	1,738	91245	1,352	70980	1,038	54495
55 — 60	1,290	74175	1,332	76590	767	44102·5	884	50830
60 — 65	1,716	107250	2,288	143000	1,604	100250	1,379	86187·5
65 — 70	1,381	93217·5	2,025	136687·5	1,620	109350	744	50220
70 — 75	1,589	115202·5	2,165	156962·5	2,113	153192·5	1,408	102080
75 — 80	902	69905	1,508	116870	1,103	85482·5	1,206	93465
80 — 85	589	48592·5	790	65175	973	80272·5	916	75560
85 — 90	201	17587·5	381	33337·5	552	48300	424	37100
90 — 95	63	5827·5	159	14707·5	196	18130	191	17667·5
95 —100	9	877	38	3765	77	7507·5	42	4095
100 & upwds.	24	2460	..	..	..	..	15	1537·5
Total .	37,004	992499·5	52,861	1375005·5	44,830	1176426	28,145	885822·5

TABLES E.—*continued.*

Actual Results.

Ages.	ESSEX. Number Dying.	ESSEX. Years of Life.	SUFFOLK. Number Dying.	SUFFOLK. Years of Life.	NORFOLK. Number Dying.	NORFOLK. Years of Life.	HEREFORD. Number Dying.	HEREFORD. Years of Life.
5	2,337	5841·5	2,185	5462·5	3,144	7860	520	1300
5 — 10	503	3772·5	364	2730	553	4147·5	95	712·5
10 — 15	238	2975	228	2850	289	3612·5	50	625
15 — 20	270	4725	278	4865	292	5110	72	1260
20 — 25	282	6345	285	6412·5	298	6705	90	2025
25 — 30	230	6325	207	5692·5	279	7672·5	85	2337·5
30 — 35	208	6760	228	7410	227	7377·5	63	2047·5
35 — 40	189	7087·5	174	6525	222	8325	55	2062·5
40 — 45	204	8670	177	7522·5	216	9180	66	2805
45 — 50	179	8502·5	148	7030	215	10212·5	49	2327·5
50 — 55	178	9345	179	9397·5	201	10552·5	71	3727·5
55 — 60	199	11442·5	201	11557·5	218	12535	78	4485
60 — 65	233	14562·5	247	15437·5	278	17375	93	5812·5
65 — 70	292	19710	275	18562·5	337	22747·5	82	5535
70 — 75	357	25882·5	354	25665	457	33132·5	131	9497·5
75 — 80	307	23792·5	358	27745	449	34797·5	125	9687·5
80 — 85	266	21945	322	26565	388	32010	131	10807·5
85 — 90	151	13212·5	183	16012·5	265	23187·5	67	5862·5
90 — 95	40	3700	60	5550	107	9897·5	25	2312·5
95 —100	14	1365	21	2047·5	23	2242·5	6	585
100 & upwds.	1	102·5	3	307·5	4	410	4	410
Total .	6,678	205864	6,477	215347·5	8,462	269090	1,958	76225·5

Results by the respective Rates of Mortality in each place, if containing the same Population as the Metropolis does.

Ages.	ESSEX. Number Dying.	ESSEX. Years of Life.	SUFFOLK. Number Dying.	SUFFOLK. Years of Life.	NORFOLK. Number Dying.	NORFOLK. Years of Life.	HEREFORD. Number Dying.	HEREFORD. Years of Life.
5	12,599	31497·5	11,690	29225	13,154	32885	8,451	21127·5
5 — 10	1,260	9450	1,686	12645	2,001	15007·5	1,483	11122·5
10 — 15	1,016	12700	1,066	13325	1,050	13125	677	8462·5
15 — 20	1,394	24395	1,514	26495	1,170	20475	1,135	19862·5
20 — 25	1,814	40815	2,061	46372·5	1,628	36630	1,855	41737·5
25 — 30	1,624	44660	1,660	45650	1,697	46667·5	1,843	50682·5
30 — 35	1,517	49302·5	1,892	61490	1,551	50407·5	1,346	43745
35 — 40	1,279	47962·5	1,279	47962·5	1,182	44325	1,096	41100
40 — 45	1,328	56440	1,340	56950	1,165	49512·5	1,265	53762·5
45 — 50	979	46502·5	899	42702·5	955	45362·5	772	36670
50 — 55	1,014	53235	1,143	60007·5	966	50715	1,111	58327·5
55 — 60	984	56580	1,014	58305	855	49162·5	951	54682
60 — 65	1,183	73937·5	2,259	141187·5	1095	68437·5	1,095	68437·5
65 — 70	1,188	80190	929	62707·5	951	64192·5	861	58117·5
70 — 75	1,473	106792·5	1,343	97367·5	1,380	100050	1,286	93235
75 — 80	1,034	80135	1,045	80987·5	972	75330	917	71067·5
80 — 85	837	69052·5	857	70702·5	786	64845	723	59647·5
85 — 90	470	41125	398	34825	416	36400	332	29050
90 — 95	180	16650	174	16095	177	16372·5	112	10360
95 —100	58	5655	60	5850	53	5167·5	24	2340
100 & upwds.	24	2460	24	2460	24	2460	19	1947·5
Total .	33,255	949537·5	34,333	1013312·5	33,228	887530	27,354	835485

The Metropolis: its Boundaries, Extent, and Divisions for Local Government. By Joseph Fletcher, Esq., Barrister-at-Law, Hon. Sec.

[*Read before the Statistical Society of London, 19th February,* 1844.]

Being called upon for a contribution to the transactions of this Society, it appeared to me that the most useful which it was within my limited abilities and means to offer, would be one conveying an outline of the several urban districts which form the Metropolis, and of their subdivisions for local government and public works. To trace the history of the local institutions of the Metropolis, or describe their present powers and operation, would far exceed the limits of such a communication as the present. But when several royal commissions, temporary or permanent,—the Metropolitan Improvement Commission, the Health of Towns Commission, and the Commissioners of Woods, Forests, &c., —are all earnestly engaged in examinations as to the effects of existing arrangements, and in the preparation of plans of amelioration, the merest outlines of the mass with which they have to deal, and of the institutions whose defects they have to supply, will form, in some measure, a useful skeleton index to the results of their labours when they shall appear.

The portion of the town which first claims our notice, is the ancient *City of London*, of the separate government of which, by its own Corporation, as much is already known, by every member of the Society, as could be conveyed within the present limits. It will suffice, therefore, to state that it is a municipal county in itself, and is the ancient nucleus around which the rest of the metropolis has, in comparatively recent times, been aggregated. Though the name of "London" is now employed nationally, and therefore properly, to designate the whole of the vast town and wide-spread suburbs inhabited by the metropolitan population, yet it belonged, until a very recent time, exclusively to the City within the Walls, which comprised nearly the whole metropolis down to the reign of Elizabeth, when the Liberties, now designated the City without the Walls, were still chiefly occupied by open fields. The ancient suburban and rural character of the City without the Walls is still strongly indicated by the greater size of its parishes, as compared with those within the Walls; the average of the former being about eighteen acres, and of the latter scarcely more than two-and-a-half. The distinction between the City within and the City without the Walls is now merely nominal. When the latter, in the course of the seventeenth century, became covered with buildings, the community of jurisdiction under which it was placed with the former made it be regarded as one under the name of "the City;" the ancient "Liberties" being thus, as it were, forgotten; and "the City" was henceforward entered at the "bars" which marked the ancient limits of its Liberties, and not at its "gates," which were engulphed in buildings, and came gradually to be regarded as mere obstructions to its busiest thoroughfares, until their general removal near the close of the last century.

The term "*City*" is now, therefore, employed to designate the whole of the municipal territory comprehended within the outer boundary of the ancient Liberties. In several charters relating to the City of London, the term "suburbs" is employed, but no very precise idea appears to have been attached to this term, unless it be understood of the Liberties.

The boundary between the City and the precinct or the jurisdiction of the Constable of the Tower was anciently a subject of much contest; and it is still a standing instruction to the civic committee, called the Committee of City Lands, to resist the Constable's encroachments. A portion of the buildings of the Tower itself, and portions of the liberty of the Tower are included within the most ancient boundaries of the City, the walls of which passed over the present site of the Tower. The citizens, who had political purposes in their obstinacy, never ceased to claim the exercise of their liberties to the furthest limit of their ancient jurisdiction; but from the Conquest the Constable had power to keep them at bay; and at the present day the whole of the Tower and of the Tower Liberty is practically excluded from the City jurisdiction, although the latter comprises the whole parish of Trinity Minories, which is reckoned, both civilly and ecclesiastically, to be a City parish, while yet it is not included in any ward.

In the City within the Walls there are 97 parishes, occupying an estimated space of only 370 acres; and in the City without the Walls (as defined by the census) 11 parishes, the two precincts of Blackfriars and Whitefriars, and the whole of the Inns of Court and Chancery, which are also extra-parochial, within a space of 230 acres; making the total of the City only 600 acres, or considerably less than one square mile. This small area, extending lengthwise from the Temple to the Tower, was occupied naturally by several dry gravelly elevations, rising gently from the north bank of the Thames, separated from each other by brooks flowing southward to that river, and presenting a site as healthy as it is advantageous for empire and for commerce.

In the beginning of the last century, the population within the Walls was not much less than 140,000, as is proved by the parish registers, and the annual mortality was as 1 in 20 of the population; but space within its limits having gradually become more valuable for warehouses than for human habitation, it was reduced in 1841 to 54,626, with a rate of mortality less than 1 in 40. The population of the City without the Walls was about 69,000 at the commencement of the last century, and in 1841 it amounted only to 70,382. Thus, though the population of the City without the Walls has not materially increased for a century and a half, yet we see at how small a distance from the very centre of the Town the constantly increasing demand for places of mere business ceases to be felt to a depopulating extent. It is the City within the Walls which we must regard as one vast counting-house and warehouse, where the banker, the merchant, the warehouseman, and the retail dealer meet, and to which no small number of consumers also resort.

"Owing to the enormous increase of the trade of the metropolis, one-half of the City at least may now be calculated to be occupied by warehouses and counting-houses. Public offices, and buildings of that nature, take up a very considerable space. Much, also, even of the retail trade and handicraft occupation is carried on in houses in no part devoted to regular family residence. Add to this, that the great change in domestic habits and manners has engendered a love of privacy and retirement, which prompts many persons, even at some sacrifice of pecuniary interest, to withdraw themselves as much as possible from the bustle of business to a neighbourhood where

they may enjoy better air and more cheerful society. The consequence of this is, that out of the vast numbers who resort daily to the City to pursue their regular avocations, not one-twentieth proportion of them are to be reckoned among the constant inhabitants; and that proportion is, for the most part, though certainly not entirely, composed of the inferior orders. The tide of population flows in large streams into the City every morning, and is again disgorged at the close of the day. The City, properly so called, may now be considered rather as a vast mercantile emporium or factory than as a place of general habitation. When we speak, therefore, of the present population of London, we must be careful to distinguish between those who pursue their daily employments and occupy tenements within the City for the purpose of trade merely, and those who are strictly to be accounted inhabitants. If we calculate the population on the latter basis, the City must be considered, even with reference to the present liberal style of house-keeping, as half deserted; if on the former, we shall readily calculate that but a small proportion, probably not more than a tenth part, could by possibility become inhabitants, if any regard be had not merely to that luxurious ease which the circumstances of many of them can command, but to what, at the present day, are considered the common comforts and necessaries of life."*

The really resident population—the population sleeping within the City — consists principally of the tradesmen of the principal streets; the tavern-keepers, inn-keepers, &c.; the second class of warehousemen; the warehouse labourers, porters, attendants, carmen and drivers; and, in the back streets, also a considerable number of working mechanics of the clothing and building trades. In the City without the Walls these latter are in still greater proportion; and together with them are found great numbers of hawking vendors of fruit, fish, vegetables, &c., of general labourers, and, in the east, of Jewish pedlars, and people who do not know, when they rise in the morning, by what chance job in the streets or the markets they are to get food for the day. Proximity to the seat of employment induces these people to crowd into central localities, abandoned to them for more advantageous sites by the trading classes; and they form a very large proportion of the population contained in such parishes as those of St. Botolph Aldgate, and Bishopsgate, and Trinity Minories, on the east side of the City; St. Botolph Aldersgate, St. Giles's Cripplegate, and St. Bartholomew the Great and Less, on the north; and St. Bride Fleet-street, St. Dunstan in the West, St. Sepulchre Newgate-street, and St. Andrew Holborn below the Bars, on the west; these parishes forming, with the precincts of Whitefriars and Blackfriars of similar character, the whole of the City without the Walls, excepting the Inns of Court and Chancery.

The annexed is a table of the several parishes contained in the City, which is here inserted because they are of so different a character from the parishes without its limits as not to be admissible as part of the succeeding table for the whole metropolis.

* Norton's Commentaries, p. 186--8.

Table of the Parishes and Precincts of the City of London, their Population and Houses, and the Wards within which they are severally included.—(Derived from the Census Returns and the Report of the Corporation Commissioners.)

*** The estimated Area of the City Within the Walls is 370 acres; and of the City Without the Walls, inclusive of the Inns of Court, 230 acres; making a total of 600 acres, or less than one square mile.

PARISHES AND PRECINCTS.	Population, 1841	Houses Inhabited 1841	Place of Nativity.		WARDS.
			Within the County.	Elsewhere	In which the several Parishes, &c., are included.
WITHIN THE WALLS.					
1 St. Alban in Wood-street	479	92	175	304	Cripplegate Within.
2 Allhallows, Barking	1,924	246	1,158	766	Tower.
3 Allhallows in Bread-street	263	58	105	158	Bread-street, Cordwainers.
4 Allhallows the Great	672	93	367	305	Dowgate.
5 Allhallows in Honey-lane	155	25	70	85	Cheap.
6 Allhallows the Less	181	22	98	83	Dowgate.
7 Allhallows in Lombard street	516	83	279	237	Bishopsgate Within, Bridge.
8 Allhallows, Staining	502	103	286	216	Aldgate, Tower.
9 Allhallows, London Wall	1,620	218	1,059	561	Aldgate, Bishopsgate Within, Bread-street, Lime-street.
10 St. Alphage, near Sion College	976	136	610	366	Cripplegate Within.
11 St. Andrew, Hubbard	331	48	194	137	Billingsgate.
12 St. Andrew, Undershaft	1,163	181	685	478	Aldgate, Lime-street.
13 St. Andrew by the Wardrobe	750	88	433	317	Castle Baynard.
14 St. Anne within Aldersgate	513	58	232	281	Aldersgate Within.
15 St. Anne, Blackfriars	2,846	276	1,801	1,045	Farringdon Within.
16 St. Anthony, vulgarly Antholin	357	61	184	173	Cordwainers.
17 St. Augustin, vulgarly Austin	289	39	130	159	Bread-street, Cordwainers, Farringdon Within.
18 St. Bartholomew, Exchange	307	65	156	151	Broad-street.
19 St. Benedict, vulgarly Bennet Fink	383	83	228	155	Broad-street.
20 St. Bene't, Gracechurch	333	50	177	156	Billingsgate, Bridge.
21 St. Bennet, at Paul's Wharf	588	80	349	239	Castle Baynard.
22 St. Bennet, Sherehog	145	26	99	46	Cheap, Cordwainers.
23 St. Botolph, at Billingsgate	278	34	116	162	Billingsgate.
24 Christ Church	2,446	246	1,155	1,291	Farringdon Within.
25 St. Christopher-le-Stocks	16	2	12	4	Broad-street.
26 St. Clement, near Eastcheap	236	38	125	111	Candlewick.
27 St. Dionis, Backchurch	806	122	479	327	Lime-street.
28 St. Dunstan in the East	1,010	175	507	503	Tower.
29 St. Edmund the King	391	63	203	188	Langbourn.
30 St. Ethelburga	669	86	347	322	Bishopsgate Within.
31 St. Faith under St. Paul	781	118	420	361	Castle Baynard, Farringdon Within.
32 St. Gabriel, Fenchurch-street	386	66	236	150	Tower.
33 St. George, Botolph-lane	235	32	128	107	Billingsgate.
34 St. Gregory by St. Paul	1,444	185	652	792	Castle Baynard.
35 St. Helen near Bishopsgate	659	130	368	291	Bishopsgate Within.
36 St. James in Duke's-place	964	123	706	258	Aldgate.
37 St. James at Garlickhithe	520	52	343	177	Vintry.
38 St. John Baptist, Dowgate	367	62	207	160	Cordwainers, Dowgate.
39 St. John the Evangelist	108	18	33	75	Bread-street.
40 St. John Zachary	183	34	82	101	Aldersgate Within, Farringdon Without, Cripplegate Within.
41 St. Katherine Coleman	606	96	342	264	Aldgate.
42 St. Katherine Creechurch	1,740	250	1,175	565	Aldgate
43 St. Laurence Jewry	625	110	265	360	Cheap.
44 St. Laurence Pountney	381	47	186	195	Candlewick, Dowgate.
45 St. Leonard, Eastcheap	137	27	73	64	Billingsgate, Bridge.
46 St. Leonard, Foster-lane	331	46	187	144	Aldersgate Within.
47 St. Magnus, London Bridge	239	35	74	165	Billingsgate, Bridge.

Table of the Parishes and Precincts of the City of London, &c.,—continued.

PARISHES AND PRECINCTS.	Population, 1841	Houses Inhabited 1841	Place of Nativity. Within the County.	Place of Nativity. Elsewhere	WARDS. In which the several Parishes, &c., are included.
WITHIN THE WALLS—*continued.*					
48 St. Margaret, Lothbury . .	189	39	74	115	Broad-street, Coleman-street.
49 St. Margaret Moses . . .	250	40	97	153	Bread-street.
50 St. Margaret, New Fish-street	266	47	115	151	Billingsgate, Bridge.
51 St. Margaret Pattens . . .	167	28	90	77	Billingsgate, Tower.
52 St. Martin, Ironmonger-lane	198	36	72	126	Cheap.
53 St. Martin Ludgate . . .	1,255	120	706	549	Farringdon Within, Farringdon Without.
54 St. Martin Orgars . . .	353	56	188	165	Bridge, Candlewick.
55 St. Martin Outwich . . .	135	33	74	61	Bishopsgate Within, Bread-street.
56 St. Martin Vintry . . .	288	44	138	150	Vintry.
57 St. Mary Abchurch . . .	526	74	272	254	Candlewick.
58 St. Mary, Aldermanbury .	751	95	329	422	Cripplegate Within.
59 St. Mary Aldermary . . .	494	75	253	241	Cordwainers.
60 St. Mary-le-Bow, Cheapside	346	61	169	177	Cheap, Cordwainers.
61 St. Mary Bothaw, Dowgate .	257	42	117	140	Dowgate.
62 St. Mary Colechurch. . .	238	47	130	108	Cheap.
63 St. Mary Hill, Billingsgate .	987	103	453	534	Billingsgate.
64 St. Mary Magdalen, Milk-st.	207	50	85	122	Bread-street, Cripplegate Within.
65 St. Mary Magdalen, Old Fish-street	783	88	426	357	Castle Baynard.
66 St. Mary Mounthaw . . .	378	27	184	194	Queenhithe.
67 St. Mary Somerset . . .	375	42	212	163	Queenhithe.
68 St. Mary Staining . . .	268	47	154	114	Aldersgate Within.
69 St. Mary Woolchurch . .	150	29	71	79	Broad-street, Cheap.
70 St. Mary Woolnoth . . .	317	55	162	155	Langbourn.
71 St. Matthew, Friday-street .	160	29	75	85	Bread-street, Farringdon Within.
72 St. Michael, Bassishaw . .	687	122	395	292	Bassishaw.
73 St. Michael, Cornhill . .	454	91	213	241	Cornhill.
74 St. Michael, Crooked-lane .	329	54	176	153	Bridge.
75 St. Michael, Queenhithe .	647	63	389	258	Queenhithe.
76 St. Michael-le-Quern . .	212	36	103	109	Farringdon Within.
77 St. Michael Royal . . .	251	32	148	103	Dowgate.
78 St. Michael, Wood-street .	328	59	125	203	Cripplegate.
79 St. Mildred, Bread-street. .	351	45	155	196	Bread-street, Queenhithe.
80 St. Mildred, Poultry . . .	280	48	163	117	Broad-street, Cheap, Broad-street.
81 St. Nicholas Acons . . .	194	37	92	102	Langbourn.
82 St. Nicholas Cole Abbey .	254	31	149	105	Broad-street, Queenhithe.
83 St. Nicholas Olave . . .	431	45	260	171	Queenhithe.
84 St. Olave, Hart-street . .	816	150	429	387	Aldgate, Tower.
85 St. Olave, Old Jewry . .	168	37	75	93	Cheap, Coleman-street.
86 St. Olave, Silver-street . .	972	129	619	353	Farringdon Within, Cripplegate Within.
87 St. Pancras, Soper-lane . .	162	38	54	108	Cheap, Cordwainers.
88 St. Peter, Cheapside . . .	227	42	91	136	Bread-street, Cripplegate Within, Farringdon Within.
89 St. Peter, Cornhill . . .	656	109	311	345	Bishopsgate Within, Lime-street.
90 St. Peter, Paul's Wharf . .	341	50	175	166	Castle Baynard, Queenhithe.
91 St. Peter-le-Poor, Broad-street	559	122	310	249	Broad-street.
92 St. Stephen, Coleman-street.	3,699	493	2,163	1,536	Coleman-street.
93 St. Stephen, Walbrook . .	322	56	172	150	Cheap.
94 St. Swithin, London Stone .	389	66	204	185	Walbrook.
95 St. Thomas Apostle . . .	648	84	346	302	Cordwainers.
96 Trinity the Less	633	58	396	237	Cordwainers, Queenhithe.
97 St. Vedast, alias Foster . .	427	59	175	252	Farringdon Within.
Total . . .	54,626	7,791	29,830	24,796	

Table of the Parishes and Precincts of the City of London, &c.—continued.

PARISHES AND PRECINCTS.	Population, 1841	Houses Inhabited 1841	Place of Nativity. Within the County.	Place of Nativity. Elsewhere	WARDS. In which the several Parishes, &c., are included.
WITHOUT THE WALLS.					
98 St. Andrew, Holborn . . .	5,966	576	3,463	2,503	Farringdon Without.
99 St. Bartholomew the Great .	3,414	339	2,408	1,006	An ancient suburban Liberty, now included in Farringdon Without.
100 St. Bartholomew the Less, including the Hospital .	744	30	388	356	
101 St. Botolph without Aldersgate	4,491	550	2,403	2,088	Aldersgate Without, Portsoken.
102 St. Botolph without Aldgate	9,525	1,219	6,380	3,145	Bishopsgate Without.
103 St. Botolph without Bishopsgate	10,969	1,273	6,980	3,989	Bishopsgate Without.
104 Bridewell Precinct, including the Hospital Chapelry. .	529	55	286	243	A separate Liberty, locally in Farringdon Without.
105 St. Bridget, vulgarly St. Bride	6,126	659	3,615	2,511	Farringdon Without.
106 St. Dunstan, West . . .	3,266	339	1,930	1,336	Farringdon Without.
107 St. Giles, Cripplegate . .	13,255	1,558	8,212	5,043	Cripplegate Without.
108 St. Sepulchre, Newgate . .	8,524	761	5,107	3,417	Farringdon Without.
109 Trinity in the Minories . .	579	65	331	248	Reckoned in the Tower Liberty.
110 Whitefriars Precinct . . .	1,294	130	804	490	Farringdon Without.
Total	68,682	7,554	42,307	26,375	
Total of the City Within and Without the Walls	123,308	15,345	72,137	51,171	
INNS OF COURT AND CHANCERY.					
111 Barnard's Inn	39	19	16	23	None of these extra-parochial precincts are included in any Ward of the City, though all are regarded geographically as belonging to it; indeed all are subjected to its Police Rates. except Lincoln's Inn, Gray's Inn, Staple's Inn, and the greater part of Furnival's Inn. This appears to be the best point on which to rest a distinction between those which are in, and those which are out of the City; and it is thus used in the succeeding Table for the whole Metropolis.
112 Clement's Inn	143	51	52	91	
113 Clifford's Inn, Fleet-street .	27	16	11	16	
114 Furnival's Inn	213	17	61	152	
115 Gray's Inn	325	123	114	211	
116 Inner Temple	278	185	76	202	
117 Lincoln's Inn	107	31	42	65	
118 Middle Temple	229	209	58	171	
119 New Inn	46	23	19	27	
120 Serjeants' Inn, Chancery-lane	5	2	2	3	
121 Serjeants' Inn, Fleet-street .	81	18	16	65	
122 Staple's Inn	32	12	17	15	
123 Thavies Inn	175	29	55	120	
Total	1,700	735	539	1,161	
Total of the "City" with the "Inns"	125,008	16,080	72,676	52,332	

The above Table shows the important fact that two-sevenths of the population were not born even within the county of Middlesex, much less in the City itself; and in all ages of its history it is probable that this has been the spot to which the disposable vigour and enterprise of the nation have most resorted for advancement by industry and traffic. It shows, also, in which of the twenty-six wards each parish is included (although the parishes are not generally conterminous with the wards), for it is the wards which are the basis, in the City, of all taxation for municipal purposes.

Between the occupation of so large a portion of the City by its richer commercial classes merely as an arena for business, and of other large

portions by mere labourers, the "free and trading householders," who alone form the body of the Corporation, or ever think of aspiring to its honours, are reduced to little more than the miscellaneous tradesmen of its few streets of retail traffic; and it is generally by no means the most opulent or the most active of these who are willing to sacrifice their time to the engagements which would encroach upon it in the Common Council. It is only, therefore, through historical associations, the accident of position, and the continued exercise of great local trusts, that the Corporation of London has now any political weight: it is the mere shell of a metropolitan life which no longer inhabits it.

The *Borough of Southwark* is by far the most ancient of the large suburbs of London, and, perhaps, derived both its name and origin from some defences of the ferry which here crossed the Thames from London to the old Roman Road to Dover; or, accepting a less remote antiquity, from defences at the south end of London Bridge.

The "Town," Township, or "*Villa*" of Southwark (*i. e.* the present Guildable Manor), was granted to the citizens of London upon their petition in Parliament by the charter of the 6th March, 1 Edward III. But notwithstanding the petition praying for the grant, and the charters by which it is made, it appears incidentally from a charter granted by Henry II. that "Sudverc" was at that early period within the jurisdiction of the City. Therefore it is probable that the Charter of Edward III. was only a confirmation of their title. By the Charter of 2 Edward IV. the town of Southwark, with various branches of jurisdiction hereinafter specified, was again granted to the citizens. Lastly, Edward VI., by charter tested at Westminster, 23rd April, in the fourth year of his reign, grants to the City all that the King's Lordships or Manors of Southwark, lately pertaining to the Monastery of Bermondsey (the present Great Liberty Manor), and also that the Manor and Borough of Southwark, late parcel of the possessions of the Archbishop and See of Canterbury (the present King's Manor).

Immediately after the date of the charter of Edward VI., granting the Borough of Southwark to the Corporation of London, and expressly directing that the inhabitants of the borough should thenceforth be "in the order, government, and correction of the Mayor and officers of the City of London," the town and Borough of Southwark constituted a separate ward of the city; and an alderman was appointed, with the denomination of the Alderman of Bridge-ward-Without. The alderman of Bridge-ward-Without was originally chosen by the Court of Aldermen, out of four or more freemen of London, nominated and put in election by the inhabitants of Southwark, precisely in the same manner as the aldermen were at that time appointed in the other wards of the city. This mode of appointment and election, though it was discontinued by an act of Common Council in the year 1557, certainly affords a strong contemporaneous exposition of the intention of the charter of Edward VI., that the inhabitants of the borough should participate in the incidents of the municipal constitution of London. But since the year 1557, the inhabitants of the borough have not had the semblance of popular election of an alderman, nor is there any satisfactory evidence that wardmotes were ever holden within the borough, or members returned by it to the Common Council.

These questions have frequently undergone consideration by the parties

most interested in them; the inhabitants of the Borough of Southwark having, on several occasions within the last 70 years, discussed the expediency of procuring from the Corporation of London a more complete communication of the privileges of citizenship, and in particular of recovering the right of electing an alderman and representatives in the Common Council. Addresses have at various times been presented to the Common Council from the freemen of London inhabiting Southwark, and from the inhabitants of Southwark generally, praying for the allowances of representatives to their ward of Bridge Without, and other advantages; but always without success in regard to the representation.

In 1835 and 1836, however, when the Corporation Reform Act had excited the attention of the whole country to the subject of municipal re-organization, a number of the inhabitants again memorialised the Common Council of London, to be efficiently incorporated with the City, either by an act of that body, or by an Act of the Imperial Legislature. But the Committee of Common Council, to which the subject was referred, reported that such an annexation was beyond the powers of the Common Council, since the charters granting to the corporation a jurisdiction over Southwark had not detached it from the county of Surrey, or reduced it from being a district borough, for many important purposes; that the Act of the 4th of Edward VI., for the election of an alderman by Southwark, under the name of Bridge-ward-Without, was expressly stated by that of the 4th and 5th of Philip and Mary, which repealed it, never to have been put in execution by the mayor and aldermen; and that a principal reason for their not observing it was probably the difficulty, if not impracticability, of their legally doing so, particularly in regard to the constituting and holding a wardmote of the inhabitants of the borough, as many of the duties of an alderman at the wardmote, such as the appointment of inquest constables, and other ward officers, would be inconsistent with the duties of another office which then existed, and still exists in the borough, viz., that of the seneschal or steward, whose jurisdiction, and those of the Courts Leet and Court of Record over which he presided, could not be restricted or varied but by Act of Parliament; difficulties which were no less great after the lapse of three more centuries than at the time they had given rise to the repealing Act of the 4th and 5th of Philip and Mary, which provided that from thenceforth the alderman of that ward should always, on a vacancy, be elected by the Lord Mayor and aldermen at a full court of aldermen, to be holden in the inner chamber of Guildhall. Also that finally, in 1711, it was provided by another act of Common Council, that the senior aldermen who had passed the chair should have the option of taking the aldermanship of this ward on its becoming vacant; an option which is still generally used.

"Upon the policy or expediency of the Corporation applying to the Legislature for the powers sought for by the Petitioners to be vested in the Corporation, or for an Act of Parliament making the Town and Borough of Southwark a part of the City of London, our attention," states the Committee, "has been drawn by Mr. Town Clerk to the following as some of the many difficulties which appear at this period to be opposed to the adoption of such a measure, and which, with others, it will be requisite to remove or surmount in order to render the Town and Borough of Southwark a part of the City of London, and to enable the inhabi-

tants to enjoy all the liberties, privileges, and franchises in the same manner as they are enjoyed by the citizens of London within the City, viz.—

"The long use of the privilege of the inhabitants, without reference to any corporate qualification, to return of their own choice, distinct from the City of London, two members to represent them in the Commons House of Parliament:

The concurrent jurisdiction of the sheriff and magistrates of the County of Surrey, and the police establishment at Union Hall:

The powers exercised by the High Steward and Marshal of the King's House; the said town and borough being within the verge:

The contribution to the county rates, of which Southwark pays a very considerable proportion:

The erection of a new gaol, or such enlargement of the Borough Compter as may render it fit for the purpose of a separate and exclusive jurisdiction; the gaol in Horsemonger-lane not being in such a case available:

The being subject to the militia laws and to the billeting of soldiers:

The commissioners of sewers of the county, and the district commissions for paving and lighting and watching the borough, and other local authorities created by Act of Parliament:

The establishment of the Metropolitan Police in the distrtcts of the borough:

The powers of the several courts of the city and its officers, in respect to the attachments of property, foreign attachments, &c., although granted by the charter of Edward VI., and the compelling of persons to take up the Freedom of the City, never having been exercised in the borough:

And the trial of Nisi Prius causes at the assizes of the county, for which it would be necessary to make some provision or arrangement for their trial within the City, as is now done in London at the London sittings of the several courts at the Guildhall, &c."*

Having weighed all these facts, the Committee were unanimously of opinion that the Court of Common Council does not possess sufficient powers to enable it to comply with the wishes of the petitioners in relation to the Town and Borough of Southwark, without the sanction and authority of the Legislature, and that it would be neither expedient nor advisable for that court to make an application to the Legislature to obtain powers for the purpose.† On the like grounds the same Committee equally reported against the admission of inhabitants of Southwark to the freedom of the City on reduced fines, and without the intervention of any companies, as inhabitants of the City itself were then recently admitted, under a resolution of the Common Council of the 17th of March, 1835.‡

This case of the Borough of Southwark certainly affords a lesson worthy of the study of constitution makers, and sufficiently explains the inaptitude of the City's institutions for extension to the whole metropolis as rapidly as its buildings have in recent times extended. They are, or rather have been, deeply rooted in local customs, legalized by immemorial usage; customs which, beyond the limits of the City, were early modified or extinguished by local government becoming the property of

* Report of the Committee of General Purposes, dated 18th May, 1836, pp. 6. and 7.

† Ibid, p. 8.

‡ Report dated 18th May, 1836.

the feudal lord of the manor, and being exercised by his steward; and, when this system declined, they were certainly not revived by the local nominees of the Crown, the justices of the peace, whose appointment marks the still continued compromise between the feudal system and the central sovereignty. Their transfer from one end of London Bridge to the other, or from one side of Temple Bar to the other, was therefore prevented by the vested rights of manorial lords and other local authorities, to eradicate which, on principles of justice, after they had lost all the pliability which had permitted the manors of Portsoken and Farringdon to be early numbered among the wards of London, would have required a legislative effort greater than the exigencies of the case have ever paramountly demanded. It is difficult to imagine, however, when the corporation of the City had itself become possessed of the manorial rights of local government in the Borough, that they might not easily have obtained the sanction of the Crown and of Parliament to an efficient incorporation of that important suburb under one system of municipal government with the City itself, instead of treating it merely as a dependent municipal colony, the inhabitants of which were, however, on the other hand, well content to escape being compelled to take up their freedom.

The Corporation having recently withdrawn their magistracy and police from any active duties in the Borough of Southwark, to leave uninterrupted the proceedings of the Metropolitan Police Magistracy and Police, they now exercise scarcely any rights or powers within its limits not possessed by manorial proprietors in other outlying portions of the metropolis. They still, however, hold a Court of Record, called the Borough Court, with its prison, of which but little use is made, except to exact a stipend for the bailiff out of the suitors at the rival Court of Requests. The county magistrates of Surrey retain their concurrent jurisdiction, and may exercise the same authority here as in other parts of that county within the jurisdiction of the Central Criminal Court; but the stipendiary magistrates and this court in effect divide the criminal jurisdiction between them, as is in a great degree the case throughout the metropolis beyond the boundaries of the City. The sheriff of Surrey executes writs in the borough, notwithstanding the express grant of their execution to the Corporation of London; but the powers of the Corporation have been always so ill defined and unsystematically exercised, that this or some other point has perpetually been in dispute between it and the county. These concurrent jurisdictions also cause great and unnecessary inconvenience to the inhabitants of Southwark, who are called upon by the City of London to serve as jurors at the Town Hall, at the Court of Record, at the three Courts Leet, and on coroner's inquests. Under the county jurisdiction, they are liable to serve on juries at the Quarter Sessions and Assizes, and for assessing damages on writs of inquiry from the courts at Westminster, and also in the Sheriff's Court, instituted under a late Act of Parliament, as to debts not exceeding 20*l.*. They are also required to serve on juries at the Central Criminal Court at the Old Bailey, and at the Palace Court in Scotland-yard; they are likewise liable to serve as constables, ale-tasters, flesh-tasters, &c., on the appointment of the Courts Leet, and are finable for not taking those offices; and finally, they are liable to be called upon to serve as constables for the parishes in which they reside.

The Southwark parishes of St. George the Martyr, St. John Horsleydown, St. Olave, St. Saviour, and St. Thomas, together with that of Christchurch, occupy about 600 acres; the "Borough" being equal in extent to the "City," though its population is one-fifth less. The latter parish was formerly part of St. Saviour's, under the name of Paris Garden Manor, or the Bear Garden. A church was built in it in 1630, and this locality was constituted a separate parish by Act of Parliament in 1670. It was a place of little consideration until ready access to it was opened by the completion of Blackfriars Bridge; and until after the Reform Act it did not share in the parliamentary franchise of the rest of the borough. At the commencement of the last century, the population of the Borough was about 45,000, and in 1841 it was 98,098. This population is of the same character as the resident population of the City, excepting only that there is a larger proportion of water-side labourers and sailors, and of the lower classes of prostitutes. In the poorer districts, somewhat farther from the shipping and the wharfs, are numbers of hatters, tailors, shoemakers, carpenters, smiths, labourers, and vendors of fish, fruit, &c., in the streets.

The city of Westminster having had an origin as a separate and even rival town, the inhabitants of which entertained animosities towards the Londoners which sometimes led to bloodshed, it will be preferable next to notice the places around the City of London and Borough of Southwark which have never had any other than a suburban character, dependent upon those ancient centres. They are distinguished by having been included, together with London, Southwark, and Westminster, in the *Bills of Mortality* which were kept and published by the parish clerks, as a warning to the Court and others to leave London whenever the plague became more fatal than usual; but as this great scourge made its last appearance on the Bills in 1679, the great motive for extending the scope of the returns with the increase of the metropolis was lost; and their bad nomenclature was causing these records gradually to be discontinued before they were entirely superseded by the returns now regularly published by the Registrar General of Births, Deaths, and Marriages.

The Tower and its Liberty, or the Parish of St. Peter ad Vincula, with the Old Tower Liberty Without, an adjacent precinct, are the first to challenge attention among the places included in this boundary; for though containing, in 1841, no more than 1417 inhabitants (including 523 soldiers in barracks), they form, with the parish of Trinity Minories and the Old Artillery Ground, which raise the population only to 3554, a separate county, as it were, under the Constable of the Tower, as its Lord Lieutenant, and having its separate commission of the peace, and its court of sessions, held at the Sessions-house in Wellclose-square. For this, however, as for every other part of the metropolis, most of the judicial duties of an ordinary quarter or general sessions of the peace are now discharged by the Central Criminal Court, while those of local justices devolve on the stipendiary police magistracy.

This, and the other Middlesex parishes and places included within the old Bills of Mortality, completely encircle the City on the east and north, and extend in those directions nearly to the widest limits which we can yet assign to the metropolis. They come no farther westward,

however, than to St. Giles's in the Fields, and St. George's, Bloomsbury; the following being a complete list of them:—St. Andrew, Holborn, above Bars, with St. George the Martyr; St. Matthew, Bethnal Green; St. Botolph Without, Aldgate; the Charter House; Christchurch, Spitalfields; St. Clement Danes (part); St. James and St. John, Clerkenwell; Duchy of Lancaster (part); Ely Place; St. Giles's in the Fields and St. George, Bloomsbury; St. George's in the East; Glasshouse Yard; St. John, Hackney; St. Mary, Islington; St. Katherine near the Tower; St. Ann, Limehouse; St. Luke, Middlesex; Rolls Liberty; Saffron Hill and Hatton Garden; St. John the Baptist in the Savoy; St. Sepulchre (part); St. Paul, Shadwell; St. Leonard, Shoreditch; St. Dunstan, Stepney (being the hamlets of Ratcliffe and Mile End Old and New Town); St. John, Wapping; and St. Mary, Whitechapel; besides the Tower Liberty, the Old Tower precinct, and the Old Artillery Ground. The population of these places in 1841 was 667,386.

On the Surrey side of the Thames there are only four parishes included in the old Bills of Mortality, viz., St. Mary, Rotherhithe; St. Mary, Bermondsey; St. Mary, Newington Butts; and St. Mary, Lambeth. They are all, however, large parishes, completely encircling the Borough of Southwark, at the back of which they extend from the Limehouse Reach to the Vauxhall Reach of the River Thames. They contained, in 1841, a population of 169,242; so that the whole of the parishes, besides those of the Cities of London and Westminster and the Borough of Southwark, which were included within the old Bills of Mortality, and comprised, at the commencement of the last century, a population of about 326,000, contained, in 1841, a population of no less than 836,628.

These "out" parishes, included by the old Bills of Mortality, are the great commercial, manufacturing, artisan, labourer, and mariner suburbs; having, near the river, docks, warehouses, manufactories, and places of business of every kind, with shops in the main streets; but behind these, the parts approaching nearest to the City and Borough are densely populated by dock labourers, coal-whippers, weavers, watchmakers, shoemakers, bricklayers and their labourers, and artisans of every kind; and, in such quarters as Bethnal Green, Whitechapel, and St. Giles's, by large numbers of persons living in a very low condition, whose honest occupations are not so easy to discover. It is the vast bodies of the labouring classes thus aggregated round the centre of the town, and not absolutely in its centre, that are properly the great object of solicitude in a sanatory view. On the west, the belt is continued from St. Giles's through the back streets of Soho, St. Martin's, and the contiguous parishes of the Strand. Between these localities and the lower parts of Westminster intervenes the region of Whitehall; but from Westminster, crossing the river to Lambeth, the belt is complete. Next to this will be found, farther in the outskirts, the habitations of the clerks, book-keepers, shopmen, and other middle-class dependents on the commercial and other establishments which do not afford them a domicile for the night; and outside these again, the more substantial houses of their employers, occupying the frontage of the main roads and streets, with inferior and sometimes very wretched localities in the rear. These portions of the metropolis have no local authorities over those of their several parishes, or over their local boards for parochial purposes and

public works, except the magistracy of the counties of Middlesex and Surrey, in which they are respectively included, and the police magistrates and commissioners acting for the whole metropolis, and committing to the Central Criminal Court, to which the county sessions on each side of the water relinquish most of their judicial business.

To the west of the great town of trade and labour composed of the City of London, the Borough of Southwark, and the outlying parishes within the old Bills of Mortality, is another, more expressly of residence (being the seat of government, of professional learning, of the fine arts, and of polite intercourse for the whole kingdom); the more ancient parts of which are included in the city and liberties of Westminster, while the remainder is under the Middlesex and the Metropolitan magistrates, in like manner as the outlying parishes within the bills of mortality on the north side of the Thames.

Westminster was from a very early period a market town under its ecclesiastical lords, separated from London by open fields, in the midst of which was the little hamlet of Charing; and it is since the reign of Elizabeth that the liberties of both cities have been so extensively populated that their buildings have come in continuous series to either side of Temple Bar. Westminster, under the Dean and Chapter, appears to have had, with some peculiar powers, only the manorial constitution of any country town under its lord, until the passing of the local Act of the 27th of Elizabeth, apparently procured through the influence of Lord Burleigh, who held the honorary office of High Steward.

This Act, which was of a temporary nature, was made permanent by the 29th of George II. c. 25, under which the City, with its widespread liberties, is divided into twelve wards, and the Dean, or the High Steward appointed by the Crown, nominates a "Burgess" over each yearly, but in practice he retains his dignity during good behaviour. With the assistance of the Burgesses, the Dean or High Steward chooses twelve "Assistant Burgesses," who, with the preceding, form the Court of Burgesses, and were designed to have the powers of an Alderman's Deputy in each Ward, as the Burgesses were apparently to have had those of a City Alderman. The Act gives these officers magisterial authority within the City and Liberties of Westminster, but since the establishment of the metropolitan police courts or offices in 1792, this authority has fallen into disuse, and they now exercise no magisterial functions, except in the regulation of weights and measures. The Dean and High Steward, with the assent of the Burgesses and Assistants, were to make bye-laws for the government of the inhabitants, as the Courts Leet formerly did; and under this provision Lord Burleigh caused a set of ordinances to be established for the better preservation of good order in the City. At present, however, as for many years past, the Court of Burgesses meets only for the purpose of amerciaments upon offenders presented by the annoyance jurors.* Such is the constitution of the existing nominal "Corporation" of the so-called "City of Westminster," but it is obviously nothing more than a permanent manorial leet jury. Its history also affords a lesson in local law, by proving that large powers will never be exercised efficiently, nor long exercised at all, by an inherently feeble body, unmoved by either local

* Sir F. Palgrave on Corporate Reform, p. 101.

or national responsibility. There is also, it should be mentioned, a Deputy Steward, appointed by the High Steward, with the approbation of the Dean and Chapter; and a High Bailiff, appointed by the Dean and Chapter, who holds annual Courts Leet, in which constables are appointed, and has the return of writs, and usually a lease of the fines, forfeitures, and other emoluments of the franchise. There is likewise a coroner appointed by the Dean and Chapter.

The only separate jurisdiction in Westminster, however, which has any effective existence, is its express commission of the peace, the magistrates under which have their sessions-house opposite the Abbey, and their prison in Tothill Fields. Still the County Magistrates of Middlesex have a concurrent jurisdiction, and the ordinary metropolitan jurisdictions of police and justice, centreing at the Home Office and the Central Criminal Court, are the real local government for purposes of criminal justice.

The ancient parish of the City of Westminster is that of St. Margaret's, now called St. Margaret's and St. John's, from a new church consecrated in A.D. 1728. In the Liberty of Westminster, St. Martin-in-the-Fields is the mother-church of St. Paul Covent Garden (A.D. 1645), of St. Ann Soho (A.D. 1678), of St. James's (A.D. 1684.) and of St. George Hanover-square, (A.D. 1742); St. Mary-le-Strand and St. Clement Danes are ancient parishes connecting Westminster with the City of London. The close or precinct of the cathedral church of St. Peter, commonly called Westminster Abbey, is extra-parochial. The population of Westminster, including all these places, was about 130,000 at the commencement of the last century, and in 1841 amounted to 222,053. The parish of St. John, Westminster, with part of that of St. Margaret, forming the district of Tothill Fields, enclosed by Westminster Abbey, St. James's Park, Pimlico, the Vauxhall-road, and the Thames, and encircling the Millbank Penitentiary and the Westminster Bridewell, is chiefly inhabited by mechanics and the lower classes of labourers, the condition of whose habitations, in the worst part of St. John's parish, is very wretched. In the parishes of St. Clement Danes, St. Mary-le-Strand, St. Martin-in-the-Fields, and St. Ann's Soho, there is, to the north of the Strand, another crowded mass of labouring population, intermingled, like the other, with inhabitants of disreputable character. But the rest of the City and Liberties of Westminster, bounded on the north by Oxford-street and the Uxbridge-road, and on the west by the parishes of Kensington and Chelsea, is occupied by the royal palaces and parks, the public offices, the clubs and houses of the nobility and gentry, and the smart habitations of the tradesmen in the streets of business, with here and there isolated retreats of crowded labourers, occupying even the narrowest space, for the sake of proximity to their employment, which is an imperative condition of their retaining it. The new region of Belgrave-square is perhaps the only portion which has not these localities; but it is contiguous to the lower population of Tothill Fields on the one side and Chelsea on the other. It has already been mentioned that Westminster and its liberties were included in the old Bills of Mortality.

The greatest extension of the Town, beyond the limits marked by these Bills, has been westward and northward, in the parishes of St. Pancras, St. Marylebone, Paddington, Kensington, and Chelsea, which completely encircle the City and Liberties of Westminster (the older town of resi-

dence, to which they may be regarded as suburban,) on the north and west, and are all that Mr. Rickman, in the preface to the Census Abstracts of 1831, deems it necessary to add to the quarters already described, to comprise the whole population of the metropolis. At the beginning of the last century he calculates that they comprised only 9150 inhabitants; but in 1841 their united population was no less than 360,113. The two parishes at the extremes of these suburbs, viz., those of St. Pancras and Chelsea, contain much the largest proportion of the labouring classes; and in all of them there are particular localities which are very wretched; but the whole of Marylebone, with the western side of St. Pancras, forms the noble region bounded by Oxford-street and the Edgeware and Hampstead Roads, and comprising the Regent's Park and St. John's Wood; Paddington contains the splendid new quarter of Hyde Park Square, occupying the space between the Edgeware and Uxbridge Roads; and Kensington is a suburban district, almost wholly of substantial houses and dispersed villas.

Within these limits Mr. Rickman reckons the population of the whole metropolis, at the commencement of the last century, to have been about 674,000, while in 1841 it was no less than 1,713,100, without any allowance for seamen; being an increase of 254 per cent., while the population of England has increased from 5,475,000 to 15,911,646, or 291 per cent., which is 37 per cent. more than the increase of the metropolis. Feeling, however, that objections might be taken to the limits thus assigned, Mr. Rickman adds a total of the population of all the parishes whose churches are situated within eight miles of St. Paul's, which amounted in 1831 to 1,776,556, after adding four per cent. for sailors, soldiers, and unenumerated strangers; but it will presently appear possible to adopt limits at once less arbitrary and less extensive.

The bills or *Tables of Mortality*, now published weekly, quarterly, and annually by the *Registrar General*, have added, on the west, the parishes of Fulham and Hammersmith; on the north, that of St. Mary, Stoke Newington; and on the east, those of St. Leonard, Bromley, and St. Mary-le-Bow, all in the county of Middlesex; and on the south, that of Camberwell, in Surrey, and those of St. Nicholas and St. Paul Deptford, Greenwich, and Woolwich, in the county of Kent. The whole of these parishes are of the usual suburban character, with pleasing scattered houses, and some very wretched neighbourhoods, with the exception of those in the county of Kent, which have a distinctive character as the arsenal portion of the town. Unfortunately, Woolwich, in these last additions, is left entirely isolated from the rest of the metropolis by the intervening parish of Charlton. The Registrar-General's boundary is otherwise very imperfect; for while it makes this ill-accomplished extension on the east, it excludes, at the opposite end of the town, the whole of the important suburbs rising from Vauxhall Bridge to Clapham, and thence connected with Wandsworth and Battersea; while on the Middlesex side, though it extends an ample distance westward, it capriciously excludes Hampstead, at the same time that it includes the greater part of the more distant suburb of Highgate. The additional parishes added by this boundary contained, in 1841, a population of 163,067.

The obvious imperfection of all these boundaries compels us still to seek some other, and to inquire whether, to the present day, there really has been drawn no boundary of the metropolis for any political or admi-

nistrative purpose whatever which would mark, by its aptitude for some definite purpose, the limits within which is comprised the whole of the population that can fairly be considered metropolitan in locality and in character. The outer boundary of the metropolitan boroughs at first suggests itself; but this excludes the western suburbs on the west and south-west, so as not to reduce too low the county constituencies of Middlesex and East Surrey; and that to such an extent as to preclude all possibility of its adoption. The next boundary which offers itself is the original limit adopted for the metropolitan police, by the 10th of George IV. c. 44, which, notwithstanding the addition of rural districts in every direction, still has a recognized existence under the 3rd and 4th of William IV. c. 19. There can be no doubt of the superior propriety of this boundary over every other which had yet been drawn, at the time of the first-mentioned statute; and had it been adopted by Mr. Rickman in 1831, would undoubtedly have directed the attention of the Registrar-General to a fitter limit than that which has heretofore been used for the new tables of mortality. Still it has two very considerable defects, for it extends so far westward as to include Ealing and Brentford; while on the south-east, by stopping short with the parish of Greenwich, it excludes Woolwich, and the rest of the parliamentary borough of Greenwich, as well as the suburban villages of Lee and Lewisham.

The faults in this boundary have, however, been expressly corrected by the one which it is now proposed to adopt, for statistical purposes, as that which administrative experience proves to be the circuit of the population socially connected with and organized upon London, to the exclusion of such as is suburban to the first towns in the surrounding counties, and dependent upon their petty sessions for the minor aids of criminal justice. This is the outer boundary of the Metropolitan Police Court Districts, as fixed by an Order in Council of November 10, 1840, amended by one of February 5, 1841, and extended by another of Dec. 16, 1842, all issued under the statutes of the 2nd and 3rd of Victoria, c. 71, and the 3rd and 4th of Victoria, c. 84. This boundary makes the limit of the metropolis, south of the Thames to be coincident with that of the jurisdiction of the Central Criminal Court from Plumstead Marshes, below Woolwich, southward and westward by Eltham, Sydenham, Norwood, Streatham, Tooting, and Wimbledon; but here approaching the vicinities of Kingston and Richmond, it turns straight northward between Barnes and Mortlake, and, crossing the Thames, includes Chiswick and Acton, but excludes Brentford and Ealing, which are included in the original metropolitan police boundary, with the rest of the Middlesex course of which latter boundary, the one adopted for the police courts is identical; running eastward to Kilburn Wells, including Hampstead, and thence running along the Highgate Hills to Hornsey Wood, Stamford Hill, and the Lea, above Lea Bridge, whence it follows the course of that river to the Thames, and the channel of the latter to Plumstead, where its commencement on the south side of the river has already been noticed. The extreme length of the district thus encircled, from east to west, is about 16 miles; its extreme breadth, from north to south, about 10, and its contents about 130 square miles; which would form a tract of somewhat more than 11 miles square.

The parishes and places comprised in it, which are not contained in

any of the boundaries already described, are of a well known suburban character, and full of the habitations of persons who have daily avocations in the metropolis, in continuous rows, or in detached villas. They are, the parishes of Hampstead, Acton, and Chiswick, in Middlesex; the Wandsworth and Clapham Union, comprising the parishes of Battersea, Clapham, Putney, Streatham, Tooting, and Wandsworth, with the further outlying parishes of Barnes, Wimbledon, and Merton, and the hamlet of Penge, in Surrey; and the Lewisham Union, comprising the parishes of Charlton, Eltham, Lee, Lewisham, and Plumstead, the liberty of Kidbrooke, and the hamlet of Mottingham, in Kent; the total population of which places, in 1841, was 87,713; an amount within the space which, were there no other evidence, would be decisive as to the propriety of their being regarded as suburban to the metropolis, independent of that which is afforded by the rate of increase.

The boundary which it is here proposed to adopt is at once the most regular which has yet been offered, the most consistent with ancient divisions, and the most nearly coincident with the limits to which the sewerage, the supplies of water and gas, the labours of the Metropolitan Road Commissioners, and other public works extend.

Progress of Population in the several Portions of the Metropolis.

Town Districts, as above described.	1801	Increase per Cent.	Decrease per Cent.	1811	Increase per Cent.	1821	Increase per Cent.	Decrease per Cent.	1831	Increase per Cent.	Decrease per Cent.	1841
London, within the Walls	75,171	..	35	55,484	1	56,174	3	..	57,695	..	5	54,626
London, without the Walls, including the Inns of Court	81,688	..	25	65,425	6	69,260	..	2	67,878	4	..	70,382
London, City . .	156,859	..	30	120,909	5	125,434	..	..	125,573	..	..	125,008
Southwark, Borough	67,448	7	..	72,119	19	85,905	7	..	91,501	7	..	98,098
Parishes within the old Bills of Mortality, suburban to London and Southwark . .	364,526	37	..	498,719	24	616,628	23	..	761,348	19	..	907,828
Westminster, City .	158,210	2	..	162,085	12	182,035	11	..	202,080	10	..	222,053
Adjacent Parishes, not within the old Bills of Mortality	117,802	32	..	155,714	38	215,642	36	..	293,567	23	..	360,113
Metropolis (Rickman's Boundary)	864,845	17	..	1,009,546	21	1,225,694	20	..	1,474,069	16	..	1,713,100
Additional Suburban Parishes, included within the new Bills or Tables of Mortality .	64,047	35	..	86,428	16	100,138	19	..	119,476	33	..	158,067
Metropolis (Registrar General's Boundary) . .	928,892	18	..	1,095,974	21	1,325,832	21	..	1,593,545	17	..	1,871,167
Suburban Parishes added by the Metropolitan Police Courts Boundary.	37,971	31	..	49,640	22	60,742	19	..	72,839	20	..	87,713
Metropolitan Police on Duty . . .	..	..	..	..	..	..	..	..	..	..	..	2,930
Metropolis (Police Courts Boundary)	966,863	18	..	1,145,614	21	1,386,574	20	..	1,666,384	17	..	1,961,810

*** The remainder of this paper will appear in the next number of the Journal.—Ed.

PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

Second Ordinary Meeting, December 18, 1843.

Rowland Hill, Esq., in the Chair.

The following gentlemen were elected :—

A. W. Barnes, Esq.	W. G. Lumley, Esq.
Rev. H. Davies.	W. A. Graham, Esq.
John Mac Clean, M.D.	Thomas Wicksteed, Esq.
Captain Larcom, R.E.	James Hodgkin, Esq.
Colonel Colby, R.E..	W. Barker, Esq.

Samuel K. Wilson, Esq.

The following gentlemen were proposed as candidates for admission into the Society :—

The Hon. E. P. Bouverie. Henry Hobhouse, Esq.

A paper by Edwin Chadwick, Esq. " On the Proper Modes of Measuring by Statistical Returns the Duration of Life, and the Pressure and Progress of the Causes of Mortality amongst different Classes of the Community and amongst the Population of different Countries," was read. (*See* p. 1.)

Third Ordinary Meeting, January 15, 1844.

Thomas Tooke, Esq., V. P., in the Chair.

The following gentlemen were elected :—

The Hon. E. P. Bouverie. Henry Hobhouse, Esq.

John Dunlop, Esq. and Richard Clewin Griffith, Esq. were appointed the auditors of the Society's accounts for 1843, in conjunction with Dr. Bowring, M.P., on behalf of the Council.

A paper by G. F. P. Neison, Esq. " On a Method recently proposed for conducting Inquiries into the Comparative Sanatory Condition of various Districts, with Illustrations derived from numerous places in Great Britain at the Period of the last Census," was read. (*See* p. 40.)

Fourth Ordinary Meeting, February 19, 1844.

The Right Hon. Viscount Ashley, M.P., President, in the Chair.

The following gentlemen were formally admitted Fellows of the Society :—

A. W. Barnes, Esq. Hon. E. P. Bouverie.

Charles Hindley, Esq. M.P.

The following gentlemen were proposed as candidates for admission into the Society :—

T. Milner Gibson, Esq., M.P.	Thomas Trevethan Spicer, Esq.
John Meeson Parsons, Esq.	Charles Creag, Esq.

The following letter from Mr. Hallam was read :—

Dear Sir, 24, *Wilton Crescent, February* 16, 1844.

I am very desirous to contribute, as far as in my power, to the promotion of those valuable inquiries into the condition of the poor in metropolitan districts which have been commenced by the Statistical Society, and of which we had a sample last year as to a part of the parish of St. George's, as well as, at an earlier time, as to other districts. I enclose, therefore, a cheque for 25*l.*, which, as I have been informed, will enable the Society to lay before the world the result of a similar investigation into some other portion of the metropolis. The inquiry last year appeared to me so well conducted that, if no objection exists, I should conceive, that the same person might be employed, and it is a matter of some importance, with a view to comparison, that statements necessarily rather too indefinite, such as those as to the condition of the poor must be, should proceed from the same person, and consequently be referred to the same standard.

I would leave wholly to the Society the choice of a parish or district to be thus investigated. The neighbourhood of Fleet-street, Chancery-lane, and Holborn has

been mentioned to me; but I believe it would be a very favourable specimen of the lower population of this city, and possibly it may be more for the good of the labouring class to bring forward some less happily situated district. This however as I have said, the Council will best determine.

I am, my dear Sir, very faithfully yours,

J. Fletcher, Esq. (Signed) HENRY HALLAM.

The thanks of the meeting were unanimously voted to Mr. Hallam for his liberal donation in aid of the Society's labours.

A paper was read by Joseph Fletcher, Esq. entitled, "The Metropolis: its successive Limits, present Extent, and divisions for Local Government." The length of this paper, and the importance of the subjects treated in it, caused the reading of the latter portion to be deferred until the next ordinary meeting of the Society on the 18th of March, on the understanding that the arrangements for sewerage would, in the mean time, receive the further consideration of its author.

BILLS OF MORTALITY.

"THE quarterly return, to which the following remarks apply, is derived from 114 districts (subdivided into 571 registrars' districts). Thirty-three of the districts are in the metropolis; and the remaining 81 districts comprise, with some agricultural parishes, the principal towns and cities of England. At the last Census (June 7th, 1841,) the enumerated population of the 114 districts was 6,534,535, or nearly *four-tenths* of the total population. The average annual number of deaths registered in the 114 districts was 163,193, or 47 per cent. of the total deaths registered annually in England."

42,263 deaths were registered in the Autumn quarter of 1843; while 40,683 was the average number in the five Autumns of 1838–42. The *Population* of the districts increased about 5 per cent. every three years from 1831–41, and as it is probable that the increase continued down to 1843, the deaths in the Autumn of 1843 would, at the same rate of mortality as in previous years, be 5 per cent. more numerous. The corrected average with which 42,263 should be compared is 42,717.

The deaths in the provincial districts were 28,525, the uncorrected average number for Autumn being 28,867. The mortality was, therefore, in the aggregate, considerably below the average.

The Mortality of the *Metropolis* was above the average: the deaths were 13,738, or 1,923 more than 11,815, the average of five previous Autumns. After a correction for the increase of population, the excess is 1,368 deaths. Small-pox was fatal to 114 persons; which is below the average (360), but 39 more than in the previous quarter. *Measles*, was more fatal (Deaths 455), and *Scarlatina* destroyed 706 persons, 163 more than in the previous quarter. The epidemic appears to be increasing. Diarrhœa, Dysentery and Cholera were more fatal than usual, 380 persons having died of these diseases. Of the 221 deaths by *Dysentery* in this and the previous quarter, 87 occurred in the Greenwich Union Workhouse during the 14 weeks (August 13th to November 18th). The deaths by the diseases of the nervous system were 226 above the average; the deaths by Bronchitis and Pneumonia (inflammation of the lungs) were 2,000, or 695 above the average; and the diseases of the digestive organs proved fatal to 981 persons—215 above the average. Fewer violent and sudden deaths were registered than is usual. The Registrars in the other parts of the kingdom mention as prevalent diseases *Scarlatina, Measles, Typhus*, and other complaints.

Districts in which the mortality was *higher* than the *Autumn* average of the same districts:—The districts of the *Metropolis*, Maidstone, Winchester, Wycombe, Bedford, Cambridge, Yarmouth, Devizes, Dorchester, Exeter, Bath, Bristol, Clifton, Stroud, Birmingham, Aston, Lincoln, Derby, West Derby (adjoining Liverpool), Wigan, Chorlton, Merthyr Tydvil.

Districts in which the mortality was *lower* than the Autumn average of the same districts;—*Windsor*, *Oxford*, Norwich, Redruth, Penzance, *Dudley*, *Walsall*, Wolverhampton, Wolstanton and Burslem, Coventry, Leicester, Nottingham, Basford, Macclesfield, Great Boughton (including Chester), Liverpool, Prescott, Manchester, Salford, Ashton, Sheffield, Huddersfield, Leeds, Sunderland, Tynemouth, Newcastle-on-Tyne, Kendal, Pontypool, Newtown.

The meteorological observations have been discontinued at the apartments of the Royal Society; but the Autumn is considered to have been unusually mild.

MORTALITY OF THE COUNTRY.

Quarterly Table of the Mortality in 114 *of the Districts of England (including the principal Towns) showing the Number of Deaths registered in the Five Years, the Average Number of Deaths in the Five Autumns* 1838-42, *and the Number of Deaths in the Autumn Quarter of* 1843, *ending* 31*st December.—(Continued from p.* 368 *of Vol. VI.)*

DISTRICTS.	Population 1841.	Annual Deaths Registered.					1838–42 Quarterly Average		Deaths in the Autumn Quarter, ending Dec. 31, 1843.
		1838	1839	1840	1841	1842	Of Five Years.	Of Five Autumns.	
*Metropolis.**									
West Districts .	300,705	8,114	6,538	6,936	6,599	6,826	1,751	1,695	1,944
North Districts.	365,660	8,944	7,890	8,594	8,261	8,550	2,112	2,107	2,408
Central Districts	373,805	10,844	9,751	9,108	9,333	8,873	2,395	2,355	2,738
East Districts .	392,496	12,434	10,359	10,063	10,004	9,947	2,640	2,683	3,199
South Districts .	438,060	12,362	10,903	11,580	11,087	11,076	2,850	2,945	3,449
Total . .	1,870,727	52,698	45,441	46,281	45,284	45,272	11,749	11,815	13,738
South Eastern Division.									
Maidstone . .	32,310	737	726	700	648	815	181	181	208
Brighton . .	46,742	916	898	980	1,102	1,126	251	266	282
Isle of Wight .	42,547	655	630	737	891	721	182	175	197
Portsea Island .	53,036	1,264	1,180	1,140	1,211	1,152	297	326	338
Winchester . .	23,044	421	479	526	416	469	116	110	132
Windsor . . .	20,502	381	367	402	395	394	97	105	79
South Midland Division.									
St. Albans . .	17,051	378	310	331	300	340	83	84	74
Wycombe . .	34,150	788	692	824	751	679	187	168	192
Oxford . . .	19,701	359	407	406	450	414	102	105	85
Northampton .	28,103	689	687	670	693	622	168	161	174
Bedford . . .	31,767	676	678	743	714	604	171	167	221
Cambridge . .	24,453	563	547	639	659	465	144	141	211
Eastern Division.									
Colchester . .	17,790	533	437	480	381	417	113	120	114
Ipswich . . .	25,254	694	630	593	499	594	150	151	147
Norwich . . .	61,846	1,373	1,852	1,752	1,362	1,582	396	374	278
Yarmouth . .	24,031	417	440	504	493	516	118	119	154
South Western Division.									
Devizes . . .	22,130	426	510	481	429	449	115	114	132
Dorchester . .	23,380	469	362	412	456	437	107	97	148
Exeter . . .	31,333	700	646	808	920	764	192	180	295
St. Thomas . .	47,105	824	819	888	859	886	214	210	224
Plymouth . .	36,527	862	670	765	730	1,141	208	217	227
Redruth . . .	48,062	914	909	1,011	906	1,232	249	265	218
Penzance . .	50,100	762	848	976	1,016	1,128	236	258	234
Bath . . .	69,232	1,567	1,602	1,974	1,728	1,598	423	412	480
Western Division.									
Bristol . . .	64,298	1,842	1,675	2,330	1,895	1,771	476	463	518
Clifton . . .	66,233	1,328	1,150	1,739	1,519	1,510	362	344	394
Stroud . . .	38,920	952	693	760	728	706	192	170	192
Cheltenham .	40,221	869	726	855	890	1,078	221	221	197
Hereford . .	33,646	774	687	758	688	862	188	192	194
Shrewsbury . .	21,529	568	514	559	520	586	137	129	135
Worcester . .	27,130	805	717	638	614	637	171	186	170
Kidderminster .	29,408	591	523	670	582	621	149	144	145
Dudley . . .	86,028	1,767	1,891	2,022	2,296	2,332	515	528	414
Walsall . . .	34,274	619	749	913	832	937	202	218	150
Wolverhampton	80,722	1,556	1,909	2,217	2,153	2,319	508	495	419
Wolstanton . .	32,669	710	795	831	757	964	203	199	179
Birmingham .	138,187	3,359	3,639	3,767	3,673	3,579	901	903	996
Aston. . . .	50,928	1,099	1,058	1,218	1,113	1,093	279	278	307
Coventry . .	31,028	684	724	616	905	290	191	211	192

* The deaths in the metropolis for the years 1840-1-2 have been derived from the weekly tables, the Returns for each year comprising 52 weeks, or 364 days. The last quarter in the metropolis ended December 30, 1843. The returns from other places are for the years ending December 31st.

A Quarterly Table of the Mortality, &c.—continued.

DISTRICTS.	Population 1841.	Annual Deaths Registered. 1838	1839	1840	1841	1842	1838–42 Quarterly Average: Of Five Years.	Of Five Autumns.	Deaths in the Autumn Quarter ending Dec. 31, 1843.
North Midland Division.									
Leicester . .	50,932	1,170	1,291	1,730	1,358	1,457	350	370	343
Lincoln. . .	36,110	620	731	817	800	720	184	188	210
Nottingham .	53,080	1,209	1,540	1,794	1,239	1,429	361	386	357
Basford. . .	59,634	1,045	1,200	1,549	1,163	1,245	310	316	280
Derby . . .	35,015	769	832	926	914	909	217	219	260
North Western Division.									
Stockport . .	85,672	2,410	2,591	2,574	2,048	2,073	585	548	534
Macclesfield .	56,018	1,315	1,528	1,745	1,419	1,403	370	350	308
Great Boughton (including Chester) . .	49,085	1,040	1,237	1,384	1,246	1,189	305	304	258
Liverpool . .	223,054	6,627	7,435	8,470	7,556	7,407	1,875	1,962	1,855
West Derby (adjoining Liverpool) .	88,652	1,625	1,746	2,206	2,202	2,405	509	575	625
Blackburn .	75,991	1,612	2,190	2,140	1,692	1,665	465	451	462
Preston. . .	77,189	1,726	1,812	2,637	2,026	2,050	513	493	459
Rochdale . .	60,577	1,477	1,673	1,868	1,417	1,476	396	378	361
Bury . . .	77,496	1,901	1,990	2,170	2,064	1,987	506	459	439
Bolton . . .	97,519	2,432	2,857	2,900	2,572	2,607	668	671	623
Wigan . . .	66,032	1,483	1,912	2,144	1,561	1,588	434	434	523
Prescott . .	43,739	916	1,056	1,155	997	1,075	260	250	223
Chorlton . .	93,736	2,140	2,418	2,399	2,431	2,427	591	574	658
Manchester .	192,408	6,706	6,774	6,589	5,821	6,151	1,597	1,612	1,437
Salford . . .	70,228	2,207	2,449	1,998	1,971	1,977	530	534	518
Ashton . . .	173,964	4,488	5,489	4,873	4,282	4,786	1,196	1,112	1,061
York Division.									
Sheffield . .	85,076	2,429	2,703	2,410	2,231	2,182	598	631	546
Huddersfield .	107,140	1,847	2,080	2,243	2,122	1,996	514	502	478
Halifax. . .	109,175	2,098	2,402	2,354	2,202	2,272	566	560	563
Bradford . .	132,164	3,093	3,251	3,176	3,041	3,323	794	788	809
Leeds . . .	168,667	4,289	4,388	4,488	4,360	4,615	1,107	1,124	1,070
Hull . . .	41,130	1,068	1,023	1,442	1,206	1,042	289	312	316
York . . .	47,779	876	1,217	1,209	1,039	1,133	274	263	257
Northern Division.									
Sunderland .	56,226	1,479	1,524	1,513	1,512	1,357	369	363	306
Gateshead .	38,747	881	968	1,016	989	909	238	242	261
Tynemouth .	55,625	1,112	1,285	1,243	1,340	1,327	315	309	280
Newcastle-on-Tyne. . .	71,850	1,829	2,117	1,957	2,104	1,726	437	491	423
Carlisle . .	36,084	855	739	901	925	840	213	224	230
Cockermouth .	35,676	784	718	696	674	597	173	163	164
Keudal . . .	34,694	729	825	821	601	714	184	177	149
Welsh Division.									
Abergavenny .	50,834	1,150	1,206	1,374	1,158	1,109	315	274	271
Pont-y-pool .	25,037	561	615	563	648	545	147	120	89
Merthyr Tydvil	52,864	1,516	1,246	1,566	1,423	1,110	343	303	372
Newtown . .	25,958	537	468	619	539	420	129	116	98
Wrexham . .	39,542	845	823	960	900	809	217	200	208
Holywell . .	40,787	897	791	864	800	738	204	210	196
Anglesey . .	38,105	645	580	632	597	624	154	142	144
Total exclusive of the Metropolis	4,663,808	109,321	116,505	124,664	114,664	115,834	29,049	28,867	28,525
Grand Total	6,534,835	162,019	161,946	170,945	159,948	161,106	40,798	40,683	42,263

PRICES OF PROVISIONS,

Average Contract Prices of the Provisions and Fuel supplied to the Workhouses

Districts marked out by the Registrar-General, and Central Unions contained therein.	Average Weekly Cost per Head of In-door Paupers. Food.		Clothing.		Food and Clothing.		Wheaten Flour per Stone.		Wheaten Bread per 4 lbs.	Meat—Beef and Mutton.	Salt Butter per lb.	Cheese per lb.	Potatoes.	
										Per lb.				
Metropolis.	s.	d.	d.	s.	d.	s.	d.		d.	d.	d.	d.	s.	d.
East London	2	7½	3½	2	11	1	10¼		5	4	6¾	..	2	9 cwt.
Holborn	1	10½	2¼	2	0¾	1	11		5¼	4	6½	4¼	3	0 cwt.
South Eastern Counties.														
Maidstone	2	5¾	3½	2	9¼	1	9		5½	4¼	7¾	4¼	2	6 cwt.
Portsea Island	2	5¼	5¾	2	11	1	10¾		5	5	6¼	3¾	3	6 cwt.
South Midland Counties.														
Northampton	2	5¾	7	3	0¾	1	9		4⅜	4½	13	6	..	
Cambridge	2	2¼	5¼	2	7½	1	10		4¾	5	10	5	..	
Eastern Counties.														
Ipswich	2	0½	7	2	7½	1	8¾		5	5	10	5¾	..	
South Western Counties.														
Devizes	1	10¾	5¼	2	4	1	7¾		4½	3¼	..	3⅞	1	0 bshl.
Penzance	2	0½	3½	2	4	1	10¾		5⅙	5¼	9½	1	3	7 cwt.
Bath	1	10	2½	2	0½	1	9½		5¼	4¼	8	3¼	4	6 sack
Western Counties.														
Stroud	1	8½	1¾	1	10¼	1	6½		4¾	5½	7¾	4	4	11½ bg.
Wolverhampton	2	2¼	3½	2	5¾	1	6		5¼	4¼	9	5	6 0 / 180 lbs	
North Midland Counties.														
Derby	1	9	3½	2	0½	1	10		5¼	4¾	12	5½	4	0 cwt.
North Western Counties.														
Macclesfield	2	4	3½	2	7½	2	2		..	3¾	9¾	6¼	5	6 load
Bolton	..		..	..		..			..	..	..	..	..	..
Prescot	1	11¾	5¼	2	5	..			4¾	3¾	8	..	1	4 bshl.
North Eastern Counties.														
Sheffield	2	2¼	9¾	3	0	1	8		..	4	..	6	6	9 load
Halifax	1	7¼	3½	1	10¾	..			5	5¼	9	7	5	0 load
Sculcoates	2	4	10½	3	2½	2	3		4½	4	12	..	0	7 peck
Northern Counties.														
Gateshead	1	9	5	2	2	1	9		5¼	4¾	11	6½	2	10 cwt.
Kendal	1	9	3½	2	0½	1	10⅝		..	3½	11	5½	0	3½ st.
Wales.														
Pembroke	1	5½	1¾	1	7¼	2	4½		7	5⅛	9	3¼	2	6 cwt.
St. Asaph	2	0	3½	2	3½	1	9		4¼	4¼	8	5½	3 9½ / 210 lbs.	

FUEL, &c.—*(Continued from p. 371 of Vol. VI.)*
of the following Unions, during the Quarter ended at Michaelmas 1843.

Peas per quart.	Oatmeal per lb.	Candles per 12 lbs.	Yellow Soap, per lb.	Coals per Ton.	Tea per lb.	Sugar per lb.	Milk per quart.	Miscellaneous Articles.
d.	*d.*	*s. d.*	*d.*	*s. d.*	*s. d.*	*d.*	*d.*	
2½	1½	5 1½	4¼	16 6	3 7	6½	1¾	Beer 5*s.* barrel.
2½	1¼	5 2	4¾	15 9	3 3	6	..	Porter 33*s.* barrel.
..	..	5 2	5	22 9	3 7	6½	1½	. . . .
2¾	1	5 3	4¾	19 6	..	..	..	. . . .
..	1½	5 6	5¼	16 6	4 0	7	2	Pearl Barley, 20*s.* per cwt. Rice, 18*s.* per cwt.
3	1½	6 0	5	23 9	3 8	5½	..	Suet, 5*d.* lb. Rice, 2*d.* lb.
2	2	5 8	5	19 6	..	..	..	Suet, 43*s.* 6*d.* per cwt.
2	2¼	6 0	5	18 7	4 0	7	..	Bacon, 4*d.* lb. Beer 1¼*d.* quart.
3¼	1½	5 9	5¼	15 3	3 11	7	..	Fish, 14*s.* 10*d.* cwt.
2	2	6 0	4¼	18 0	3 8	6¼	..	Rice, 18*s.* per cwt.
2¼	2¼	5 9	4¼	15 0	..	..	..	Rice Flour, 19*s.* cwt.
2	2½	5 4	5	5 3	3 8	6½	1	Bacon, 4¼*d.* lb. Suet, 4¼*d.* lb.
30¾	1½	5 6	4¾	7 4	4 0	7	..	Rice, 16*s.* cwt.
2½	1¼	5 6	4½	9 2	..	..	..	. . . .
..	..	..	..	..	..	..	..	. . . .
2	1	5 0	4¼	6 6	..	..	1¼	Bacon, 4*d.* per lb.
2	1	5 9	4½	6 6	4 2	7¼	1¾	Treacle, 3*s.* 8*d.* stone. Rice, 2*s.* 3*d.* stone. Coffee, 1*s.* 6*d.* lb. Ale, 7*d.* gallon.
2	1¼	..	5	8 3	4 0	6½	1¾	Beer, 10*d.* per gallon.
..	1¾	5 6	5¼	..	..	..	1	. . . .
2¼	1¼	5 9	5	4 0	4 4	6½	..	Coffee, 1*s.* 6*d.* per lb.
..	1¼	6 3	4¾	15 0	4 8	7	1	Coffee, 1*s.* 8½*d.* per lb. Rice, 2*s.* 4½*d.* per stone.
2½	2	6 6	5½	16 8	5 0	7	1	Beer, 4*d.* per gallon.
3¼	1	6 9	5	11 8	4 6	..	1¼	Rice, 2½*d.* per lb.

MORTALITY OF THE METROPOLIS.

(*Continued from p.* 365 *of Vol. VI.*)

A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, Registered in the 13 *Weeks ended December* 30, 1843.

DISEASES.	Average Deaths in the Autumn Quarters, 1838-9-40-1-2.	Deaths in the Autumn Quarter, ending December 30, 1843.
Small Pox	360	114
Measles	342	455
Scarlatina	534	706
Hooping Cough	346	464
Croup	100	126
Thrush	53	86
Diarrhœa	81	265
Dysentery	24	101
Cholera	5	14
Influenza	15	39
Ague	4	5
Remittent Fever	4	8
Typhus	422	450
Erysipelas	84	66
Syphilis	6	9
Hydrophobia	2	1
Epidemic, Endemic, and Contagious diseases	2,382	2,909
Cephalitis	137	152
Hydrocephalus	394	463
Apoplexy	229	245
Paralysis	201	230
Convulsions	678	750
Tetanus	5	7
Chorea	·8	1
Epilepsy	49	35
Insanity	13	18
Delirium Tremens	21	21
Disease of Brain, &c.	93	125
Diseases of the Brain, Spinal Marrow, Nerves, and Senses	1,821	2,047
Laryngitis	6	14
Quinsy	20	26
Bronchitis	139	286
Pleurisy	20	22
Pneumonia	1166	1714
Hydrothorax	60	79
Asthma	329	320
Phthisis or Consumption	1,698	1,743
Disease of Lungs, &c.	176	192
Diseases of the Lungs and of the other Organs of Respiration	3,613	4,396
Teething	207	263
Gastritis Enteritis	203	231
Peritonitis	16	18
Tabes Mesenterica	54	134
Worms	6	11
Ascites	8	21
Ulceration (of Intest. &c.)	18	30
Hernia	23	21
Colic or Ileus	25	32
Intussusception	6	6
Stricture	6	5
Hæmatemesis	4	6
Disease of Stomach, &c.	48	79
Disease of Pancreas	·6	..
Hepatitis	18	17
Jaundice	26	24
Disease of Liver, &c.	98	81
Disease of Spleen	1	2
Diseases of Stomach, Liver, and other Organs of Digestion	766	981

DISEASES.	Average Deaths in the Autumn Quarters, 1838-9-40-1-2.	Deaths in the Autumn Quarter, ending December 30, 1843.
Pericarditis	7	14
Aneurism	8	9
Disease of Heart, &c.	241	297
Diseases of the Heart and Blood-vessels	256	320
Nephritis	6	10
Ischuria	2	3
Diabetes	4	5
Cystitis	5	3
Stone	4	1
Stricture	7	11
Disease of Kidneys, &c.	37	56
Diseases of the Kidneys, &c.	65	89
Childbed	101	93
Paramenia	3	4
Ovarian Dropsy	2	5
Disease of Uterus, &c.	29	39
Childbed, Diseases of the Uterus, &c.	135	141
Arthritis	·4	2
Rheumatism	38	27
Disease of Joints, &c.	34	40
Rheumatism, Diseases of the Bones, Joints, &c.	73	69
Carbuncle	·6	4
Phlegmon	·8	1
Ulcer	5	8
Fistula	4	7
Disease of the Skin, &c.	5	6
Diseases of the Skin, Cellular Tissue, &c.	15	26
Inflammation	115	40
Hæmorrhage	38	48
Dropsy	467	377
Abscess	44	29
Mortification	54	61
Purpura	3	4
Scrofula	22	37
Carcinoma	94	137
Tumor	22	8
Gout	13	13
Atrophy	67	170
Debility	233	266
Malformations	10	30
Sudden Deaths	195	167
Dropsy, Cancer, and other Diseases of uncertain Seat	1,378	1,387
Old Age or Natural Decay	897	967
Intemperance	7	8
Privation	7	5
Violent Deaths	303	283
Deaths by Violence, Privation, or Intemperance	317	296
Causes not specified	98	110
Deaths from all Causes	11,815	13,738

REVENUE.

An Abstract of the Net Produce of the Revenue of Great Britain, in the Quarters and Years ended 5th January, 1843 and 1844; showing the Increase or Decrease thereof.—(Continued from p. 373 of Vol. VI.)

Sources of Revenue.	Quarters ended 5th January,			
	1843	1844	Increase.	Decrease.
Customs—	£.	£.	£.	£.
Consolidated Duties .	3,274,000	3,674,424	..	..
Sugar Duty applicable to Supplies . . .	940,089	1,092,544	..	..
Total Customs . .	4,214,089	4,766,968	552,879	..
Excise	3,022,008	3,039,771	8,763	..
Stamps	1,561,754	1,523,653	..	38,101
Taxes	1,886,163	1,868,857	..	17,306
Property Tax	257,212	454,415	197,203	..
Post-Office	141,000	143,000	2,000	..
Crown Lands	40,000	30,000	..	10,000
Miscellaneous . . .	21,537	11,917	..	9,620
Total Ordinary Revenue .	11,143,763	11,829,581	760,845	75,027
Imprest and other Moneys	107,097	50,136	..	56,961
Repayments of Advances.	235,247	332,060	96,813	..
Total Income . .	11,486,107	12,211,777	875,586	131,988
Amount applied to Consolidated Fund, exclusive of Advances . .	6,720,054	7,859,893	131,988	Deduct Decrease.
Ditto applied as Advances	140,000	291,501		
Ditto as part of the Ways and Means of the Year.	4,626,053	4,060,383	725,670	Increase on the Quarter.
Total	11,446,107	12,211,777		

Sources of Income.	Years ended 5th January,			
	1843	1844	Increase.	Decrease.
	£.	£.	£.	£.
Customs	19,075,310	19,073,219	..	2,091
Excise	11,407,304	11,794,807	387,503	..
Stamps	6,491,100	6,426,155	..	64,945
Taxes	4,273,592	4,190,480	..	83,106
Property Tax	571,056	5,249,260	4,678,204	..
Post-Office	605,000	592,000	..	13,000
Crown Lands	133,000	117,500	..	15,500
Miscellaneous. . . .	579,411	1,634,741	1,055,330	..
Total Ordinary Revenue .	43,135,773	49,078,168	6,121,037	178,642
Imprest and other Moneys	511,411	168,528	..	342,883
Repayments of Advances.	682,681	825,247	142,566	..
Total Income . . .	44,329,865	50,071,943	6,263,603	521,525
Amount applied to the Consolidated Fund, exclusive of Advances .	29,794,794	34,586,304	521,525	Deduct Decrease.
Ditto applied as Advances	559,361	764,380		
Ditto as part of the Ways and Means of the Year.	13,975,710	14,721,259	5,742,078	Increase on the Year.
Total	44,329,865	50,071,943		

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign and Colonial Wheat, during each week of the Winter Quarter of 1843; *together with the Average Prices for the whole Quarter, for the Year* 1843, *and for the seven Years ended* 31*st December*, 1843.—(*Continued from p.* 374 *of Vol. VI.*)

Returns received at the Corn Office, 1843.	Wheat. Weekly Average.	Wheat. Aggregate Average of Six Weeks, regulating Duty.	Barley. Weekly Average.	Oats. Weekly Average.	Rye. Weekly Average.	Beans. Weekly Average.	Peas. Weekly Average.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Weeks ended Oct. 7 .	50 6	51 2	30 2	17 10	30 8	30 1	32 6
14 .	50 8	50 7	30 1	17 10	30 0	30 4	32 1
21 .	50 1	50 2	30 4	17 0	29 10	30 5	32 8
28 .	50 5	50 1	30 9	17 8	30 3	31 1	32 10
Nov. 4 .	51 8	50 6	31 7	18 7	29 0	31 5	33 10
11 .	52 1	50 11	32 5	18 9	29 3	32 2	34 0
18 .	51 7	51 1	32 4	18 11	30 5	32 4	34 0
25 .	51 0	51 2	32 1	19 0	30 8	32 4	33 7
Dec. 2 .	51 1	51 4	31 8	19 0	30 7	31 10	33 6
9 .	51 0	51 5	31 8	18 8	30 1	32 0	33 0
16 .	50 9	51 3	32 0	18 6	30 0	31 6	32 4
23 .	50 3	50 11	32 2	18 7	29 9	30 10	30 10
30 .	49 9	50 8	32 3	18 5	31 4	30 1	31 6
Average of the Quarter	50 10	..	31 6	18 4	30 1	31 3	32 9
Average of the Year.	50 1	..	29 6	18 4	30 7	29 2	31 1
Septennial Average .	61 2	..	32 4	22 4	..	..	..

Date of Certificates of preceding Prices, regulating Duties for the Week ensuing.	Duties on Wheat per Quarter. From Foreign Countries.	Duties on Wheat per Quarter. From British Possessions out of Europe.
	s. d.	s. d.
Oct. 12	19 0	5 0*
19	20 0	5 0
26	20 0	5 0
Nov. 2	20 0	5 0
9	20 0	5 0
16	20 0	5 0
23	19 0	5 0
30	19 0	5 0
Dec. 7	19 0	5 0
14	19 0	5 0
21	19 0	5 0
28	20 0	5 0
Jan. 4	20 0	5 0

* By Act 6 & 7 Vict. c. 29, Wheat and Wheat Meal or Flour, the produce of Canada, and imported since the 10th October, 1843, are admitted at a fixed duty; the former at 1s. per quarter, and the latter at $4\frac{1}{2}d$ per cwt.

Foreign and Colonial Wheat and Wheat-Flour Imported in each of the Months ended 5*th November*, 5*th December, and* 5*th January*, 1843-4; *the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in bond at the close of them.*—(*Continued from p.* 374 *of Vol. VI.*)

WHEAT.

Months ended	Imported. Foreign.	Imported. Colonial.	Imported. Total.	Paid Duty. Foreign.	Paid Duty. Colonial.	Paid Duty. Total.	In Bond at the Month's end. Foreign.	In Bond at the Month's end. Colonial.	In Bond at the Month's end. Total.
	Qrs	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.
5th November.	54,846	984	55,830	2,672	983	3,655	112,248	427	112,675
5th December.	56,801	4,900	61,701	840	4,900	5,740	160,786	427	161,213
5th January .	26,107	8,659	34,766	1,132	7,815	8,947	12,097	..	12,097

WHEAT FLOUR.

Months ended	Imported. Foreign.	Imported. Colonial.	Imported. Total.	Paid Duty. Foreign.	Paid Duty. Colonial.	Paid Duty. Total.	In Bond at the Month's end. Foreign.	In Bond at the Month's end. Colonial.	In Bond at the Month's end. Total.
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
5th November.	25,956	41,891	67,847	1,603	40,783	42,836	55,002	1,761	56,763
5th December.	25,877	80,841	106,718	209	80,513	80,722	77,269	2,126	79,395
5th January .	13,625	109,370	122,995	73	106,489	106,562	87,375	4,907	92,282

CURRENCY.

Quarterly Average of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 4th November, 2nd December, and 30th December, 1843; and in the corresponding Quarters of the preceding Year.—(Continued from p. 375 of Vol. VI.)

Quarters ended	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
1843.	£.	£.	£.	£.	£.	£.
4th Nov. .	19,314,000	10,980,000	30,294,000	21,392,000	12,098,000	33,490,000
2nd Dec. .	19,121,000	10,944,000	30,065,000	20,926,000	12,275,000	33,201,000
30th Dec. .	19,098,000	11,751,000	30,849,000	21,067,000	12,855,000	33,922,000
1842.						
5th Nov. .	19,903,000	9,072,000	28,975,000	21,934,000	9,789,000	31,723,000
3rd Dec. .	19,562,000	8,957,000	28,519,000	21,210,000	9,984,000	31,194,000
30th Dec. .	19,230,000	9,063,000	28,293,000	20,560,000	10,330,000	30,890,000

Average Aggregate Amount of Promissory Notes which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks, by which issued in each part of the Kingdom, with the Average Amount of Bullion in the Bank of England, during the four weeks ended the 11th November, 9th December, and 6th January, 1843-4, respectively.—(Continued from p. 375 of Vol. VI.)

Banks.	Circulation during the Four Weeks ended		
	11th Nov. 1843.	9th Dec. 1843.	6th Jan. 1844.
	£.	£.	£.
England—Bank of England .	19,554,000	18,791,000	18,964.000
Private Banks. .	4,904,574	4,533,048	4,822.675
Joint-Stock Banks.	3,315,318	3,161,033	3,234,999
Scotland—Chartered Private & Joint-Stock Banks	2,945,030	3,166,920	2,901,746
Ireland—Bank of Ireland. .	3,511,475	3,502,475	3,489,650
Private and Joint-Stock Banks . .	2,404,045	2,376,676	2,361,189
Total . .	36,634,442	35,531,152	35,774,259
Bullion in the Bank of England	12,025,000	12,996,000	14,638,000

Consolidated Fund Operations.—The total income brought to this account in the quarter ended 5th January, 1844, was 11,138,305*l.*; the total charge was 9,906,788*l.*, leaving a surplus of 1,231,517*l.* The amount of Exchequer Bills issued to meet the charge on the Consolidated Fund for the quarter ended 10th October, 1843, and paid off out of the growing produce of that fund for the quarter ended 5th January, 1844, was 3,726,537*l.* The probable amount of Exchequer Bills required to meet the charge on the Consolidated Fund for the quarter ended 5th January, 1844, was 5,462,859*l.*

Slave Trade Police.—The following is an estimate of the charge to the public for the Ships of War, of all classes, employed for the suppression of the Slave Trade, in the year 1842:—Wages, 261,319*l.*; victuals, 165,010*l.*; wear and tear of hull, masts, &c., and stores, coals, and machinery, 149,137*l.*; total, 575,466*l.*

BANKRUPTCY.

An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ended December 31, 1844, *and in the whole year* 1844; *showing the Counties and the Branches of Industry in which they have occurred.*—(*Continued from p.* 376 *of Vol. VI.*)

COUNTIES.	October.	November.	December.	Total in 1843.
Metropolis	18	45	28	322
Bedford	..	1	..	7
Berks	..	1	2	7
Bucks	2	1	..	11
Cambridge	1	..	..	9
Chester	..	2	2	19
Cornwall	..	1	..	5
Cumberland	..	..	..	4
Derby	..	1	..	9
Devon	1	..	1	18
Dorset	..	1	1	10
Durham	3	1	3	25
Essex	1	3	2	28
Gloucester	..	1	1	21
Hants	..	4	2	24
Hereford	..	..	..	..
Hertford	..	1	..	9
Huntingdon	..	..	1	1
Kent	1	3	6	31
Lancaster	8	6	3	116
Leicester	..	..	2	9
Lincoln	..	..	2	16
Middlesex (exclusive of the Metropolis)	2	1	..	10
Monmouth	..	..	..	7
Norfolk	1	3	..	13
Northampton	..	..	1	11
Northumberland	..	1	3	18
Nottingham	1	1	1	15
Oxford	..	..	1	10
Rutland	..	..	..	..
Salop	..	1	..	16
Somerset (including Bristol)	1	2	1	26
Stafford	1	..	6	37
Suffolk	1	..	..	9
Surrey (exclusive of the Metropolis)	1	2	1	14
Sussex	2	..	3	20
Warwick	4	2	4	28
Westmoreland	..	..	..	2
Wilts	..	1	..	8
Worcester	..	5	..	14
York (East Riding)	..	2	..	14
,, (North Riding)	..	..	..	9
,, (West Riding)	1	4	1	108
Wales	3	2	4	22
Total in 1843.	53	99	82	1112
Total in 1842.	..	..	..	1273

TRADES.	October.	November.	December.	Total in 1843.
Agriculture and connected Trades.				
Farmers	..	3	1	9
Agricultural Implement Makers and Wheelwrights	1	..	..	8
Corn Factors	..	1	1	13
Millers and Malsters	2	2	1	27
Hop Merchants	..	..	..	1
Brewers	1	..	2	21
Horse and Cattle Dealers, and Woolstaplers	..	2	1	16
Mining and connected Trades.				
Mining Firms	..	..	..	4
Blasting Works	..	1	..	3
Manufactures.				
Woollen Manufactures	..	2	1	23
Cotton ,,	2	1	1	8
Linen ,,	..	..	..	4
Silk ,,	..	1	2	11
Printers and Dyers	..	..	2	13
Lace Manufacturers	..	..	..	4
Hosiery ,,	..	..	..	8
Hardware ,,	1	2	3	30
Earthenware ,,	..	..	..	6
Glass ,,	..	..	..	3
Paper ,,	..	2	1	3
Builders	2	3	3	51
Miscellaneous Manufactures	2	7	3	65
Commerce.				
Bankers and Merchants	10	1	3	60
Shipowners, Warehousemen, Brokers, and Wholesale Dealers generally	4	15	6	103
Retail and Handicraft Trades.				
Bakers	..	..	3	20
Butchers	..	1	..	8
Corn and Hay Dealers	1	..	1	10
Innkeepers and Victuallers	2	9	2	81
Wine and Spirit Merchants	..	..	2	21
Dealers in Grocery, Drugs, and Spices	6	6	10	101
Makers of, and Dealers in, Clothing	8	17	8	110
Makers of, and Dealers in, Furniture	2	3	..	29
Coach Builders	1	..	..	6
Miscellaneous	8	20	25	232
Total in 1843	53	99	82	1112
Total in 1842	..	..	..	1273

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

JUNE, 1844.

Tenth Annual Report of the Council of the Statistical Society of London. Session 1843-4.

In rendering an account of their stewardship for the year which is now closed, the Council have to congratulate the Fellows of this Society on its continued prosperity during a period which has been felt by others as one of depression. The number of its Fellows has increased; the subscriptions were never before so well paid; there is not a debt of any kind outstanding; that which used formerly to anticipate a part of the current income of each year has been wholly discharged; and, notwithstanding the outlay of 50*l.* in furniture, and the other extraordinary expenditure incurred by the removal to new apartments, the funded property of the Society remains undiminished.

The removal to apartments more commodious, more accessible, and more advantageously situated, has been desired from the very foundation of the Society, and has at length been effected, as it is hoped, to the general satisfaction of the Fellows. The handsome rooms which the Society now occupies possess every advantage for daily resort, and for the meetings of Councils and Committees. Their arrangement in suite affords great relief to crowded meetings; and the principal meeting-room itself, though it has not the area of the one formerly used, yet, owing to the economy of space which its shape admits, its better means of ventilation, and its situation comparatively remote from the noise of any paved street, affords superior accommodation to an equal number of Fellows. Nor are these advantages obtained at any great pecuniary sacrifice; for though the rent of the present rooms is 200*l.* per annum, while that of the former was only 105*l.*, yet 26*l.*, formerly paid to servants, is now included in the larger sum; from which has further to be deducted the local taxes remitted to this as to other scientific societies, by an Act of the last session. The additional charges will thus be reduced to about 50*l.* per annum, which the Council have reason to believe will be fully defrayed by the progressive increase in the number of Fellows, which more commodious rooms must tend to encourage.

The number of Fellows, at the date of the last annual meeting, was 416. The number since elected is 21; but the number of deaths and withdrawals reduces the increase to 10; so that the present number of Fellows is 426. The clear income of the Society is about 930*l.* per annum; its fixed expenditure, including that upon the Journal, will now

be about 830*l.*; there is therefore a surplus of 100*l.* per annum, available for original inquiries and the augmentation of the library.

At the close of the last session, the Council advertised the Fellows at large of the removal to Regent-street, by means of a circular reciting the objects of the Society, and describing the extent to which they have been carried out, in terms which form the best introduction it can offer to a brief notice of what has been done in the course of the past year, and of the objects which the Council next propose to attain.

"The Statistical Society of London was founded on the 15th of March, 1834, in pursuance of a recommendation of the British Association for the Advancement of Science, for the purpose of collecting, arranging, and publishing facts calculated to illustrate the condition and prospects of society, and especially facts which can be stated numerically and arranged in tables. The collection of new statistical materials, it was contemplated, would form only one part of the Society's labours; the condensation, arrangement, and publication of those already existing, whether unpublished or published only in an expensive or diffuse form, or in foreign languages, being a work of equal usefulness. It was also a prominent object of the Society to form a complete statistical library as rapidly as its funds would permit.

" Such was the purport of the original Prospectus; and now that the Society has reached the eleventh year of a prosperous existence, its Fellows have every reason to revert with satisfaction to this outline of its objects; for it is very seldom that the first designs of a public association for the advancement of science are all carried out with so much success. The resources of the Society were, in the first instance, chiefly devoted, under the direction of its Committees, to the collection of new statistical information, and to this great purpose a part of its funds is still appropriated. Its monthly meetings have cultivated among its Fellows an active spirit of investigation, and brought out the valuable results of much individual labour. Its Journal has fulfilled the purpose of condensation and publication; and the valuable books and papers which have already been collected form a library of facts of no mean utility.

" The Sixth Annual Report of the Society, which contains an elaborate description of the scope and system of its labours, divides statistics into the following chief sections :—

" I. The *Statistics of Physical Geography, Division, and Appropriation;* or, geographical and proprietary statistics.

" II. The *Statistics of Production*; or, agricultural, mining, fishery, manufacturing, and commercial statistics.

" III. The *Statistics of Instruction;* or, ecclesiastical, scientific, literary, university, and school statistics.

" IV. The *Statistics of Protection;* or, constitutional, military and naval. judicial, criminal, and police statistics.

" V. The *Statistics of Life, of Consumption, and of Enjoyment;* or, of population, health, the distribution and consumption of the commodities of life, and public and private charity.

" All the departments of statistics above described may be cultivated to the developement of as many branches of moral science, and to the attainment of that true insight into the actual condition of society, without which the application of remedial measures is purely empirical.

"Under this conviction, the original Prospectus announced the intention of the Society carefully to exclude all 'opinions' from its publications; not, assuredly, with the view of discouraging the proper use of hypothetical reasoning, but for the purpose of devoting the pages of its transactions to facts, and not to systems. In the pursuit of almost every investigation, the inquirer will adopt some hypothesis; but its truth and completeness, or its fallaciousness and insufficiency, must be demonstrated by observation and experiment. It is therefore the main purpose of scientific associations to call forth and register the results obtained by these processes; and observation in the wide field of human interests supplies those 'facts calculated to illustrate the condition and prospects of society,' which it is the design of the Statistical Society to 'collect, arrange, and publish.'

"The pursuit of statistical inquiries has already made such progress, not in England alone, but throughout Europe, as henceforth to be a necessity of the age, and one of its most honourable characteristics. Thus errors as to the actual condition and prospects of society are daily exploded, and more just data are supplied to guide the exertions of the philanthropist, the judgment of the legislator, and the speculations of the reasoner. The labours of the statist, indeed, can alone assure us that we are really advancing in that knowledge of human interests in the aggregate to which it is no longer possible to deny the name of science."

The extraordinary expenditure connected with the removal to new and more expensive apartments restrained the Council from making any outlay upon original inquiries during the past year; but, at the commencement of the present, they availed themselves of the opportunity afforded by the unembarrassed state of their funds to cancel a debt due to the Rev. E. Wyatt Edgell, on account of part of his advances to the Education Committee, by the payment of a sum of 25*l.*, long ago promised by the Council to that Committee, and the greater part of which was immediately returned by Mr. Edgell in the form of a composition. The fifth Report of the Education Committee, for which a larger sum advanced by that gentleman had contributed to procure materials, was read before the Society on the 19th of June last, and embraced the final results of a series of inquiries, embracing the means of education possessed by more than one half of the metropolitan population.

The Council have great gratification in announcing a fresh instance of benevolent zeal for the improvement of our knowledge of the condition of the poorer classes in large towns. The liberality of Lord Sandon, to which the Society was indebted last year for a very interesting report on the condition of the poorer classes in the parish of St. George Hanover-square, has been imitated by Mr. Hallam, who is one of the Society's trustees, and has given to its funds a donation of 25*l.*, for the purpose of carrying out a similar investigation in some other part of the metropolis. The Council have accordingly selected St. George's-in-the-East as a district comprising a considerable population of the labouring classes, whose condition resembles in many respects that of the people in many surrounding districts, and must afford interesting points of comparison with that of the working classes in St. George's in the West.

Nor is this the only original investigation which the Council have to submit to the approval of the Fellows. The amount of human misery existing in the metropolis, and the sums devoted to its relief, are enor-

mous; but the proportions which they bear to each other, and the extent to which each class of evils is palliated, are wholly unknown. There is thus reason to fear that, for want of some comprehensive view of the whole of the facts, many well-intentioned efforts at relief are either entirely frustrated or fall far short of the benevolent intentions of their originators. The Council, therefore, not with any view of discouraging or controlling, but with that of aiding and enlightening the efforts of voluntary charity, submit the propriety of as many of the Fellows as are disposed actively to interest themselves in such a labour, forming themselves into a Committee, and employing a limited sum in the collection of those statistics of the existing voluntary charities, which, with the published accounts of the endowed charities, and such statistics of the assessed charity as the documents of the Poor Law Commission may afford, shall supply the materials for a general classification of charities, with reference to their objects, and to the extent to which these are attained.

There is another subject, nearly related to the above, which the Council would likewise recommend for systematic investigation by a Committee, viz., the statistics of sickness and mortality, derivable from the experience of existing benefit societies, and applicable to the improvement of the laws of sickness and mortality used by those bodies. Such societies are a favourite form of provident association among the labouring classes, and one which is not likely to be soon laid aside for any more refined system. By the means proposed they may be preserved from the decay into which the greater number successively fall; and this would be a charity in the highest sense; one for which gratitude would involve no feeling of humiliation. Returns by all the registered societies are already made to the Home Office. If these afford sufficient materials, their data ought to be reduced; if not, their form should be improved, or other modes of recording and collecting information should be instituted. Through whatever processes it may be attained, the establishment of correct laws of sickness will add an important branch to social science, and add much to the means of self-improvement possessed by the poorer classes.

The Hospital Statistics Committee have procured a second enumeration of the patients in the hospitals of the metropolis; an abstract has been made of the principal facts by a distinguished member of that Committee; and some corroborative evidence, which is now being prepared from the general registration of deaths, will enable it very shortly to present a second Report to the Society. This will form an interesting addition to the various reports of Committees on Vital Statistics, which have repeatedly been the subject of honourable mention by recent journalists and writers.

Notwithstanding the economy which has been forced upon the Council during the past year with regard to original investigations, those who have attended the monthly meetings are well aware that the want of the results of such investigations has not there been felt, owing to the constant supply by individual members of original papers, conveying the results of new and extensive experience, or of great labour and patient thought. The Statistics of Justice in India, by Colonel Sykes; those of the division of property in France, by Sir John P. Boileau, Bart.; those of the influence of seasons and employments on health, by Dr. Guy; those of the sanatory condition of various districts, by Mr. Chadwick

and Mr. Neison; and those of the metropolis, by Mr. Fletcher; are instances in point.

Another evidence of the interesting character of the Society's transactions, is the increasing sale of its Journal, of which the volume just completed will be found to have many advantages over its predecessors. There is, however, an improvement connected with it which the Council propose to carry into effect, with the number which is now due. This is, to distribute it to the Fellows resident in London, free of expense, by the hands of the Society's servants, in lieu of continuing the present arrangement with a Parcels Delivery Company, which throws the charge upon the Fellows, and is accompanied by other inconveniences.

It is hoped that the labours of the House Committee,* in regard to the new apartments of the Society, and the furnishing of them, will afford that satisfaction to the Fellows at large, which the Council must, on their own account, beg permission to express, in regarding the neatness of every arrangement, and the economy which has restrained the whole cost within the estimate originally submitted. The library, too, has undergone a thorough revision and management, under the directions of the Library Committee, led by the zeal of Dr. Lister. Every effort is being made to perfect the two catalogues of the library, and it is proposed to render the classed catalogue more complete, by adding to the entries of books, others of the valuable essays scattered through the periodical works of a scientific character. So soon as these two catalogues can be made sufficiently perfect, the Council propose to print them. Every Fellow will then be able to procure a copy, by which he may know the extent of assistance which the library will afford to his investigations, without the trouble on each occasion of personally referring to its manuscript catalogues, at the rooms of the Society. By these means the materials accumulated in the library will be rendered much more available, and its usefulness greatly extended.

It is with feelings of the highest gratification that the Council beg leave finally to notice the regard for such a central depository of the evidence on which social science can alone be safely based, which has just been expressed in a communication made to the Society by Her Majesty and Prince Albert. Major Graham, the Registrar-General, having received his Royal Highness Prince Albert's commands to transmit to the Statistical Society a beautiful illuminated sheet, containing the "Tableau Général des Décês du Canton de Génève, pendant l'Année 1842," composed by M. Marc d'Espine, was honoured also with Her Majesty's commands, to express Her Majesty's gracious wish that it should be deposited with other documents of a similar nature in the library of this Society. This condescension and favour will, it is hoped by the Council, induce the Fellows of the Society generally to regard their library in the same important light, and to omit no opportunity of enriching and improving it.

For the details of the Society's pecuniary affairs, the Council would refer to the ordinary balance sheet, with the accompanying report of the Auditors.

* Composed of Thomas Tooke, Esq. F.R.S., V.P.; George Porter, Esq., F.R.S. Treasurer; James Whishaw, Esq.; Dr. Lister; Dr. Guy; W. D. Oswald, Esq.; Joseph Fletcher, Esq.

Abstract of Receipts and Expenditure from the 1st January to the 31st December, 1843.

RECEIPTS.

1843.	£.	s.	d.	£.	s.	d.
To Balance in the hands of the Treasurer and Secretaries				42	18	6
Arrears of Subscriptions: 1 for 1838	2	2	0			
,, 2 for 1839	4	4	0			
,, 4 for 1840	8	8	0			
,, 10 for 1841	21	0	0			
,, 24 for 1842	50	8	0			
				86	2	0
Subscriptions . . . .313 for 1843				657	6	0
Compositions				60	18	0
Messrs. Parker for sale of Journal				74	19	6
Dividends on Stock				43	8	3
Sale of Lithographic Press				10	0	0
Balance due to Petty Cash				22	7	8
				£997	19	11

Assets, December 31, 1843:—

	£.	s.	d.		£.	s.	d.	£.	s.	d.
Stock in the Reduced 3½ per Cent.	569	17	0	cost	567	0	0			
Consols 3½ per Cent.	328	15	4	,,	300	0	0			
Cash Balance					96	12	11			
								963	12	11

Balances of Grants made to Committees:—

	£.	s.	d.	£.	s.	d.
Library Committee	9	11	1			
Education Committee	1	5	11			
Hospital Statistics Committee	2	1	4			
House Committee	8	9	11			
				21	8	2

Due to the Society:—

	£.	s.	d.
Dividend on Stock			
Messrs. Parker for sale of Journal			
Members in arrear of Annual Subscription:—			
6 for 1839	12	12	0
7 for 1840	14	14	0
13 for 1841	27	6	0
27 for 1842	56	14	0
70 for 1843	147	0	0
	258	6	0
Deduct amount not likely to be paid	156	6	0

	£.	s.	d.
Dividend on Stock	29	16	0
Messrs. Parker for sale of Journal	36	18	0
Deduct amount not likely to be paid	102	0	0
Total due to the Society	£190	2	2

EXPENDITURE.

1843.	£.	s.	d.
By Rent	127	10	0
Salaries	204	19	0
Furniture, 50*l.*, Housekeeping expenses, 70*l.* 7*s.* 1*d.*	120	7	1
Messrs Clowes for Printing, 1842	163	19	0
,, ,, 1843	129	11	0
Carried forward	746	6	1

	£.	s.	d.
1843. Brought forward	746	6	1
By Editor of Journal one year	75	0	0
Advertising the Journal	13	18	0
Stationery	7	10	7
Lithography	1	18	0
Parcels and Postages	11	3	6
Library	19	1	10
Insurance	2	8	9
Miscellaneous	24	0	3
Balance in the hands of the Treasurer	96	12	11
	£997	19	11

Liabilities of the Society, December 31, 1843 :—

Messrs. Clowes for Printing	121	0	0
Messrs. R. T. Thorne for binding books, &c.	4	2	6
Messrs. Bailliere for Books	1	1	0
Messrs. Blackwood for Books	1	16	0
Petty Cash Balance	22	7	8
	£150	7	2

Examined and approved JOHN BOWRING, R. C. GRIFFITH, JOHN DUNLOP, } *Auditors.*

January 30, 1844.

The Metropolis; its Boundaries, Extent, and Divisions for Local Government. By JOSEPH FLETCHER, Esq., Barrister-at-Law, Honorary Secretary.

[*Read before the Statistical Society of London,* 19*th February and* 18*th March,* 1844.]*

THE outer boundary of the Police Courts Districts, which the considerations enumerated in the preceding part of this paper will, I think, lead us to adopt as that of the Metropolis, at least for the present, completely encircles the whole of the metropolitan boroughs, inclusive of Greenwich, and all the other districts which have been described; and it marks out, with geographical accuracy, the great vale filled by the metropolis and its suburbs, which is bounded on the east by Shooter's Hill; on the south by the hills of Norwood and Streatham; on the west by those of Wimbledon and Roehampton; on the north by those of Kensal Green, Kilburn, Hampstead, Highgate, and Hornsey; and on the east by the Marshes of the Lea and the Thames.†

Some idea of the wild state of this vale during all the earlier history of London, and some conception of the value once attached to the citizens' most ancient privilege of hunting in Middlesex and Surrey, may be derived from the fact that one hundred (tantamount originally to a city ward), comprises the whole of the Middlesex portions of the metropolis lying beyond the Cities and Liberties of London and West-

* For the earlier portion of this paper, see p. 69.

† The southern and least populated parts of the parishes of Lambeth and Camberwell lie, it is true, beyond this boundary; but their omission is not noticed in the text, because it has been for some time in the contemplation of Government to include them in the district of another police court, to be erected in addition to those hereafter enumerated, for parts of Lambeth, Kennington, Clapham, Camberwell, and Brixton. For the site of this court, the Commissioners of Metropolitan Police have at last fixed upon a spot in the Kennington-road, near the Zoological Gardens.

minster, and contains, likewise, beyond the limits now assigned to it, the parishes of Hornsey, Finchley, and Barnet on the north, and those of Willesden, Ealing (with New Brentford), and the extra-parochial precinct of Twyford Abbey on the west. This is the hundred of Ossulstone, deriving its name from some now extinct village or manor, and divided into the Tower Division, wholly included within our boundary; the Finsbury Division, which includes also the outlying parishes to the north above mentioned; the Holborn Division, wholly included in the present boundary; and the Kensington Division, which comprises also the outlying places to the west. So, likewise, in Surrey, the whole of the southern parts of the metropolis lying outside the Borough of Southwark, are included in the one hundred of Brixton, likewise divided into the Eastern Division and the Western Division, in which latter is included also the parish of Mortlake, excluded from our adopted boundary, apparently as being a suburb of Richmond. The portion of Kent which it includes, and which comprises the whole of the arsenal portion of the town and its suburbs, is the one complete hundred of Blackheath, in the Lathe of Sutton at Hone.

The detail into which the description of the *boundaries* of the metropolis has been carried, showing, as it does, the successive aggregations by which so vast a whole has been formed, is, in fact, an essential part of any notice of its *divisions;* and explains, without a further effort, how it has come to pass that the "parishes" (divisions of the same name and origin throughout the metropolis) possess an entirely different municipal character, according to their situation within or without the "City." The small parishes of the City have, from time immemorial, been divided among the several wards (sections having the character of the ancient hundreds) in the manner already described; and these wards have always formed the basis of the whole municipal system. But as rural parishes in the surrounding hundreds became filled with houses, the old division by hundreds could not supply to them, in combination with the still pastoral districts with which they were connected, the services of municipal government rendered by the wards of the City; for this progress of population is so recent, that when it occurred there was remaining no flexibility in the old system to adapt itself to the modern wants, which have called the mere vestries and petty officers of the parishes outside the City into a municipal importance fully equal to that of the wards within it. They now, in fact, unite most of the characteristics of both the wards and parishes in the City.

The parishes within the city, therefore, are in a more subordinate position municipally than those of any other part of the metropolis; being, in fact, in that for which their very imperfect organization was originally designed. The *wards* there form the integral divisions at the basis of all other local government; and therefore claim the first place in the following enumeration table. Analogous to these, in modern importance, are the metropolitan *parishes* without the City, which are next enumerated under the heads of the ancient territorial divisions of the counties to which they have continued to belong from the time when they were remote in the fields; divisions, however, which are now rather matter of history than available for any modern purpose of local government. The accompanying statements of the area, population, houses, rental, poor's rates, county rates, and police rates of each

ward within the City, and of each metropolitan parish without its limits, contain, however, the data from which some notion of every combination of these integral divisions may be gathered.—See Tables, pp. 106—115.

The Corporation Commissioners did not interpret the terms of their instructions, "to inquire into the several local jurisdictions existing within the limits of all *corporate towns*," to prescribe investigations without the "City," though the latter by itself seems scarcely to form a "corporate town" under the terms of the Commission, which evidently contemplated the *whole* of every town in which there existed a municipal corporation; a sense in which they were read in every other city and borough. Without such investigations, the materials for legislation upon the municipal affairs of the metropolis to any purpose of *general* benefit must remain fatally defective, notwithstanding any amount of exertion on the part of individuals; for they cannot supply that unimpeachable evidence which alone could warrant the effective interference of the Legislature.

In the reports upon other cities, the supplemental trusts for paving, cleansing, lighting, &c., which have grown up around the old corporations, are briefly described. But not a word is to be found concerning the crowd of such trusts under which each successively created suburb of London beyond the City and Liberties, fell, so soon as the absence of all provision for these commonest services became intolerable. Until the institution of the new police, the local watch was also under the charge of these trusts; but since its withdrawal their powers are limited to precisely the same services for which the consolidated rate is levied by the City Commissioners of Sewers; viz., the paving, lighting, and cleansing only of the streets.

These trusts are of various origin, dissimilar constitution, and frequently conflicting powers. A large proportion are simply the vestries of the parishes, or committees of those vestries, infected with all the vices exhibited by the parliamentary inquiry concerning vestries in 1830; the Act of the 1st and 2nd of William IV., c. 76, commonly called Hobhouse's Act, establishing popularly chosen select vestries (elected by lists in gross) having been adopted only by five parishes in the metropolis; viz., those of St. George Hanover-square, St. James Westminster, St. John the Evangelist Westminster, St. Marylebone, and St. Pancras. All the other parishes, in which there are select vestries, have them regulated either by express local acts, or by the 59th of George III., c. 12, permitting and regulating the appointment of a permanent committee out of each vestry; not, however, until the 58th of George III., c. 68, under which the open vestries still remain, had re-modelled the constitution of these, by giving to every rate-payer assessed at more than 50*l.* a vote for every additional 25*l.*, to the number of six.

In many parishes, however, the paving, cleansing, and lighting, and the levying of rates to meet these services, is vested, not in the vestries, but in Boards of Commissioners or Trustees, by local acts, which generally require various qualifications, by property or rating, for both electors and elected; and in some instances the qualification constitutes a commissioner or trustee without any election. Nor are these special trusts under local Acts, restricted to the limits of any particular parish; some of them, like those of the east and west divisions of Southwark, comprising several entire parishes; and others, parts of different parishes, or only a portion of one.

Enumeration of the several Wards of the City of London, and of the several Parishes without the City which comprise the rest of the Metropolis; with their Area, Population, Houses, Rental, Poor's Rate Assessments, and Payments to County and Police Rates. (Derived from the Census of 1841, *the Returns to the Poor Law Commissioners for the year ended Lady-Day* 1842, *and the Police Returns, Sess.* 1843, *No.* 492.)

Name of Ward, Parish, Precinct, or Place.	Area in Statute Acres.	Population 1841.	Houses Inhabited 1841.	Rental 1842.	Amount levied by Poor's Rate Assessment 1842.	Payments thereout for or towards the County Rate 1842.	Payments for or towards the Police Rate, 1842. Quota per £.	Three-fourths of Rate payable by Wards.	One-fourth of Rate payable by the City.	Total Payments, including Arrears.	Parliamentary Borough or District in which each Parish, &c., is included.
City and Liberties of London.				£.			d.	£. s. d.	£. s. d.	£. s. d.	
Aldersgate Within	of the City Within and Without the Walls.	been regarded, and this Table, therefore, can contain only the composing the whole City.	the detail of the several parishes will be found at p. 72.	14,917	City alone admits of insertion in this Table, but the detail this total comprises neither county-rate nor parishes without the City.	from the gross sum levied by the poor's-rates, which is also rates on the wards, and not on the parishes, as such.	7	455 8 7		434 10 2	
Aldersgate Without				21,311			7	633 7 6		572 8 9	
Aldgate				52,381			7	1,527 5 2½		1,430 6 8	
Bassishaw				10,551			7	317 6 4		311 6 2	
Billingsgate				27,423			7	800 17 7		756 3 5	
Bishopsgate Within				38,392			7	1,097 5 4		1,028 17 9	
Bishopsgate Without				39,430			7	1,206 5 5½		1,064 2 0	
Bread-street				23,613			7	698 17 4		621 6 8	
Bridge				19,986			7	582 17 1		540 7 3	
Broad-street				69,160			7	2,147 7 3		2,192 10 3	
Candlewick				19,116			7	557 11 0		437 14 10	
Castle Baynard				40,949			7	1,194 6 11		1,135 8 10	
Cheap				38,619			7	1,132 15 3		1,061 3 9½	
Coleman-street				54,549			7	1,571 5 1		1,457 15 6	
Cordwainer				17,465			7	509 8 7		483 10 1	
Cornhill				26,601			7	757 19 1		767 4 3½	
Cripplegate Within				41,918			7	1,222 12 8½		1,100 0 0	
Cripplegate Without				37,362			7	1,089 15 7¾		1,012 0 10	
Dowgate				20,158			7	588 3 10		555 0 0	

Farringdon Within (South-side)	There exist no means of supplying more than the total	In making out the abstracts of the Census, the division by wards has not total of the several parishes	The observation contained in the preceding column applies equally to this:	37,152	The poor's-rates being levied according to parishes, the total for the whole will be found at p. 182; and it is important to bear in mind that police-rate, as do the gross sums levied on the	No county-rate is levied in the City, and none, therefore, has to be deducted exempted from deductions for police-rates by the separate levy of these	7	1,083 12 5		1,016 14 8		
Farringdon Within (North-side)				39,049			7	1,138 19 3	9,608 8 10	1,055 6 6	City of London.	
Farringdon Without:												
St. Andrew				23,557			7	687 4 1		610 8 11		
St. Bride				10,991			7	1,040 4 8		944 3 1		
St. Dunstan				28,851			7	852 11 11½		698 6 2		
St. Sepulchre				32,797			7	956 12 2		853 18 8		
St. Bartholomew the Great				9,514			7	277 10 7½		30 0 0		
St. Bartholomew the Less				1,450			7	42 8 2		33 10 2		
Bridewell				5,651			7	163 15 5		151 19 0		
Furnival's Inn (part)				1,560			7	45 10 0		45 10 0		
Barnard's Inn				597			7	17 8 3		17 8 3		
Thavies Inn				1,120			7	32 12 6		23 16 8		
Inner Temple				18,928			7	552 1 5¾		124 0 0		
Middle Temple				4,146			7	103 13 0		. .		
Whitefriars				7,767			7	226 11 7		223 9 7		
St. Martin Ludgate				6,721			7	196 0 7		170 18 11		
Langbourn				39,809			7	1,161 2 4		1,090 0 0		
Lime-street				18,149			7	529 7 0		583 7 6		
Portsoken				43,335			7	1,262 18 11		1,010 0 0		
Queenhithe				14,993			7	461 12 8½		267 19 11		
Tower				44,361			7	1,502 19 0		1,269 17 10		
Vintry				15,703			7	458 0 5		425 0 4		
Walbrook				20,406			7	595 3 6		549 5 0		
Total of the City*	600	123,752	15,732	1,040,508	£77,188 10	. .	..	31,478 15 9½	9,608 8 10	28,156 18 7		

* The area is that of the City Within and Without the Walls, together with the Inns of Court and Chancery, for which there exist no means of making any precise deduction; but from the population and houses have been deducted those of Lincoln's-inn, Gray's-inn, Staple's-inn, and Furnival's-inn, hereafter entered as separately assessed to the Metropolitan and not to the City Police; as likewise the population and houses of Trinity-Minories parish, for the same reason, or the subsequent totals would be rendered false by the double entry of them.

Enumeration of the several Wards and Parishes of the Metropolis, &c.—continued.

Name of Parish, Precinct, or Place.	Area in Statute Acres.	Population 1841.	Houses Inhabited 1841.	Rental 1842.	Amount levied by Poor's Rate Assessment 1842.	Payments thereout for or towards the County Rate 1842.	Payments for or towards the Police Rate, 1842.				Parliamentary Borough or District in which each Parish, &c., is included.
							Quota per £.	Three-fourths of Rate payable by Parishes.	One-fourth of Rate payable by Treasury.	Total Payments, including Arrears.	
County of Middlesex				£.	£. s	£. s.	d.	£. s. d.	£. s. d.	£. s. d.	
City and Liberties of Westminster.											
St. Margaret . . .	630	30,258	3,332	164,004	18,899 14	2,356 19	8	4,100 2 0	1,366 14 0	5,446 18 8	City of Westminster.
St. John the Evangelist	210	26,223	3,073								
St. Martin-in-the-Fields	260	25,190	2,440	243,268	22,527 10	3,525 3	8	6,081 14 0	2,027 4 8	8,076 16 2	
St. George Hanover-sq.	1,090	66,453	7,629	585,288	38,572 16	8,475 6	8	14,632 4 0	4,877 8 0	19,372 2 8	
St. James Westminster	165	37,398	3,590	239,440	21,437 18	3,484 8	8	5,986 0 0	1,995 6 8	7,962 14 2	
St. Mary-le-Strand, as well within the Duchy Liberty as the Liberty of Westminster . .	16	2,520	225	12,380	1,049 10	484 16	8	309 10 0	103 3 4	257 4 8	
St. Clement Danes, as well within the Duchy Liberty as the Liberty of Westminster . .	48	11,582	1,020	78,012	9,141 18	2,735 2	8	1,950 6 0	650 2 0	2,618 5 4	
St. Paul Covent-garden	26	5,718	548	39,536	3.367 10	1,564 6	8	988 8 0	329 9 4	1,317 13 2	
St. Ann Soho . . .	55	16,480	1,404	66,092	7,306 18	2,601 15	8	1,652 6 0	550 15 4	2,198 1 6	
Close of the Collegiate Church of St. Peter	..	231	34	1,061	..	..	8	26 10 6	8 16 10	35 7 4	
Total	2,500	222,053	23,295	1,429,081	122,303 14	25,227 15	..	35,727 0 6	11,909 0 2	47,285 3 8	

Holborn Division of the Hundred of Ossulstone.												
St. Giles, and St. George Bloomsbury	250	37,311 16,981	2,876 2,083	239,664	23,797 9	3,496 1	8	5,991 12 0	1,997 4 0	6,993 10 8	Finsbury.
St. Andrew Holborn, & St. George the Martyr,	160	21,438 7,897	2,208 752	102,260	Refuse all returns.		8	2,556 10 0	852 3 4	3,795 8 4	Finsbury.
Liberty of Saffron-hill, Hatton-garden, Ely Rents and Ely-pl.	..	9,455	916	25,004	3,341 4	829 2	8	625 2 0	208 7 4	400 0 0	Finsbury.
Liberty of the Rolls .	10	2,565	303	13,792	1,494 0	547 4	8	344 16 0	114 18 8	632 16 0	Finsbury.
St. Pancras	2,600	129,763	14,766	541,200	54,665 15	7,363 9	8	13,530 0 0	4,510 0 0	18,006 5 0	Marylebone.
St. John Hampstead .	2,070	10,093	1,411	47,492	5,560 13	692 3	8	1,187 6 0	395 15 4	1,582 16 4	
St. Mary-le-bone . .	1,490	138,164	14,169	807,716	76,355 13	14,387 6	8	20,192 18 0	6,730 19 4	27,049 18 8	Marylebone.
Parish of Paddington.	1,220	25,173	3,479	174,864	9,440 12	2,147 10	8	4,130 6 0	1,377 15 4	5,122 3 0	Marylebone.
St. Clement Danes, (partly)* . . .	4	3,877	470	..	..	..	..	..	..	..	Westminster.
Precinct of the Savoy.	4	414	62	5,480	297 7	153 12	8	137 0 0	45 13 4	187 0 0	Westminster.
Total	7,808	403,131	43,495	1,957,472	174,952 13	29,616 7	..	48,695 10 0	16,232 16 8	63,769 18 0	
Finsbury Division of the Hundred of Ossulstone.†											
St. Luke Finsbury .	240	49,829	6,385	130,404	20,165 17	1,902 2	..	3,260 2 0	1,086 14 0	4,347 6 10	Finsbury.
St. Sepulchre (part) .	20	4,801	537	13,696	2,173 9	199 9	..	342 8 0	114 2 8	456 7 4	Finsbury.
St. James Clerkenwell, including the Districts both of St. James and St. John.	320	56,756	6,953	170,572	21,125 16	2,880 0	..	4,264 6 0	1,421 8 8	5,103 5 8	Finsbury.

* The local taxation of the whole parish of St. Clement Danes is included in the city of Westminster, which comprises the greater portion of the parish.
† The remainder of this division of the Hundred consists of the parishes of Fryern Barnet, Finchley, and Hornsey.

Enumeration of the several Wards and Parishes of the Metropolis, &c.—continued.

Name of Parish, Precinct, or Place.	Area in Statute Acres.	Population 1841.	Houses Inhabited 1841.	Rental 1842.	Amount levied by Poor's Rate Assessment 1842.	Payments thereat for or towards the County Rate 1842.	Payments for or towards the Police Rate, 1842. Quota per £.	Three-fourths of Rate payable by Parishes.	One-fourth of Rate payable by Treasury.	Total Payments, including Arrears.	Parliamentary Borough or District in which each Parish, &c., is included.
Finsbury Division—continued.				£.	£. s.	£ s.		£. s. d.	£. s. d.	£. s. d.	
St. Mary Islington .	3,050	55,690	8,508	209,860	16,115 16	3,107 8	8	5,176 4 0	1,725 8 0	6,843 0 4	Finsbury.
St. Mary Stoke Newington	650	4,490	716	21,208	2,052 8	302 7	8	554 6 0	174 15 4	697 4 0	Finsbury.
Glass House Yard Liberty . . .	8	1,415	196	..	Included with St. Botolph, Aldersgate, in the East London Union.						
The Charter House .	..	185	1	1,948	..	..	4	48 14 0	16 4 8	64 18 8	Finsbury.
Total . .	4,288	173,166	23,296	547,688	61,633 6	8,391 6	..	13,646 0 0	4,538 13 4	17,512 2 10	
Tower Division of the Hundred of Ossulstone:											
St. Mary Whitechapel	160	34,053	4,360	90,864	11,640 8	1,327 3	8	2,271 12 0	757 4 0	3,029 19 4	
Christchurch Spitalfields	70	20,436	2,338	30,992	7,444 2	454 8	8	775 8 0	258 9 4	1,035 3 4	
St. Leonard Shoreditch	620	83,432	12,642	169,996	26,070 0	2,632 5	8	4,249 18 0	1,416 12 8	5,657 16 8	
Norton Folgate . .	10	1,674	220	6,460	796 17	94 3	8	161 10 0	53 16 8	161 10 0	
St. John Hackney .	3,300	37,771	6,476	135,032	18,690 1	1,916 17	8	3,328 9 0	1,109 9 8	4,398 9 6	
St. Matthew Bethnal Green	760	74,088	11,782	93,256	18,432 6	1,361 0	8	2,331 8 0	777 2 8	3,109 2 4	

Mile End Old Town Hamlet . . .	2,130	45,308	7,705	105,664	13,396 1	1,528 1 8	2,641 12 0	880 10 8	3,522 2 8	Tower Hamlets.
Mile End New Town Hamlet . . .		8,325	1,044	10,064	2,291 6	147 10 8	251 12 0	83 17 4	293 10 8	
St. Mary Stratford, Bow	630	4,626	814	18,012	2,809 8	264 2 8	463 8 0	154 9 4	747 18 2	
Bromley St. Leonard's	620	6,154	1,117	19,164	2,934 1	274 2 8	479 1 0	159 13 8	399 3 4	
All Saints Poplar .	..*	20,342	3,135	124,500	12,611 17	1,790 4 8	3,101 14 0	1,033 18 0	4,113 17 4	
St. Anne Limehouse	280	19,337	2,834	40,220	6,385 9	589 5 8	1,030 13 0	343 11 0	1,757 14 8	
Ratcliffe Hamlet .	..*	11,874	1,819	25,424	4,883 9	368 9 8	635 12 0	211 17 4	846 3 0	
St. Paul Shadwell .	70	10,060	1,522	20,684	4,654 0	301 5 8	517 2 0	172 17 5	603 5 8	
St. George in the East	230	41,350	5,985	135,144	21,181 11	1,984 15 8	3,378 12 0	1,125 4 0	4,512 15 8	
St. John Wapping .	38	4,108	484	21,760	3,584 14	310 4 8	544 0 0	181 6 8	851 3 4	
East Smithfield Liberty, or St. Botolph Without, Aldgate	32	3,627	480	34,000	3,649 3	467 13 8	850 0 0	283 6 8	1,117 4 8	
St. Catherine Precinct	14	96	22	16,000	1,502 16	233 7 8	400 0 0	133 6 8	466 13 4	
Total . .	8,964	426,661	64,779	1,097,236	162,957 9	16,044 13 ..	27,411 11 0	9,137 3 8	36,623 13 8	
Tower Liberty:										
Old Artillery Ground	6	1,558	188	3,943	573 7	32 17 8	98 11 6	32 17 2	131 8 8	Tower Hamlets.
Holy Trinity, Minories	..†	579	65	2,519	396 15	21 0 8	62 19 6	20 19 10	83 19 4	
Old Tower Precinct.	24	1,417	117	2,646	119 9	22 1 8	66 3 0	22 1 0	77 3 6	
Total . .	30	3,554	370	9,108	1,089 11	75 18 ..	227 14 0	75 18 0	292 11 6	

* Acreage included in Mile End Old and New Town, which, with Ratcliffe, forms the present parish of Stepney (St. Dunstan) formerly much more extensive.

† The area of Trinity Minories Parish is included in the City.

Enumeration of the several Wards and Parishes of the Metropolis, &c.—continued.

Name of Parish, Precinct, or Place.	Area in Statute Acres.	Population 1841.	Houses Inhabited 1841.	Rental 1842.	Amount levied by Poor's Rate Assessment 1842.	Payments thereat for or towards the County Rate 1842.	Payments for or towards the Police Rate, 1842. Quota per £.	Three-fourths of Rate payable by Parishes.	One-fourth of Rate payable by Treasury.	Total Payments, including Arrears.	Parliamentary Borough or District in which each Parish, &c., is included.
*Kensington Division of the Hundred of Ossulstone:**				£	£. s.	£. s.		£. s. d.	£. s. d.	£. s. d.	
Kensington . . .	2,680	26,834	3,798	135,660	12,467 1	1,929 18	8	3,393 17 0	1,131 5 8	4,499 0 0	Middlesex.
St. Luke Chelsea .	780	40,179	5,648	119,252	†17,400 16	1,654 6	8	2,940 6 0	980 2 0	4,556 7 8	
Fulham	1,820	9,319	1,471	37,252	4,391 5	554 19	8	942 4 0	314 1 4	1,270 4 8	
Hammersmith . .	2,140	13,453	2,214	38,164	5,212 13	551 7	8	952 16 0	317 12 0	1,032 18 4	
Chiswick	1,120	5,811	1,042	15,144	2,143 15	222 6	8	381 15 0	127 5 0	411 19 0	
Acton.	2,260	2,665	468	10,520	1,223 3	152 17	8	263 4 0	87 14 8	350 7 0	
Total . .	10,800	98,261	14,641	355,992	42,838 13	5,065 13	..	8,874 2 0	2,958 0 8	12,120 16 8	
Inns of Court and Chancery without the City, Extra-Parochial:											
Lincoln's Inn‡ . .	..	107	31	10,348	..	..	8	258 14 0	86 4 8	416 19 8	Finsbury.
Gray's Inn . . .	..	325	123	13,624	..	..	8	340 12 0	113 10 8	450 7 0	
Staple's Inn . . .	..	32	12	1,424	..	..	8	35 12 0	11 17 4	47 9 4	
Furnival's Inn (part of)	..	213	17	3,164	..	..	8	79 2 0	26 7 4	105 9 4	
Total . .	..	677	183	28,560	..	..	..	714 0 0	238 0 0	1,020 5 4	
Total "City" and "Middlesex." .	35,580	1,552,283	199,626	7,734,510	688,150 17	88,268 14	..	274,507 18 3½	57,273 12 2	217,390 19 1	

County of Surrey.																		
Borough of Southwark:																		
Christchurch . .	590	14,616	1,950	53,643	5,805	15	894	1	8	1,341	1	6	447	0	6	2,123	7	5	Southwark.
St. George . . .		46,644	6,663	105,333	17,697	16	877	16	8	2,633	6	6	877	15	6	3,511	2	0	
St. Saviour and Clink		18,219	2,709	68,427	10,739	14	1,358	15	8	1,710	13	6	570	4	6	2,280	18	1	
St. John		10,115	1,499	36,318	5,266	14	302	13	8	907	19	0	302	13	0	1,210	12	0	
St. Olave. . . .		6,745	917	41,024	5,058	16	341	17	8	1,025	12	0	341	17	4	1,357	9	4	
St. Thomas . . .		1,759	107	4,320	617	16	72	0	8	108	0	0	36	0	0	126	0	0	
Total . .	590	98,098	13,845	309,065	45,186	11	3.847	2	..	7,726	12	6	2,575	10	10	10,609	8	10	
Eastern Division of the Hundred of Brixton:§																		
Bermondsey . . .	620	34,947	5,674	79,512	20,078	11	1,325	4	8	1,987	16	0	662	12	0	2,319	2	0	Southwark.
Camberwell . . .	4,570	39,868	6,843	144,935	12,058	8	2,007	0	8	3,623	7	6	1,207	15	10	4,819	9	7	Lambeth, except Dulwich in Surrey.
Clapham	1,070	12,106	2,006	49,258	6,518	12	820	19	8	1,231	9	0	410	9	8	1,594	12	2	East Surrey.
Lambeth	3,640	115,888	17,791	394,722	54,318	4	8,281	11	8	9,868	1	0	3,289	7	0	13,157	8	0	Lambeth chiefly, part in E. Surrey.
Newington . . .	630	54,606	9,370	133,023	22,619	8	2,217	1	8	3,325	11	6	1,108	10	6	4,102	2	0	Lambeth.
Penge Hamlet . .	840	270	53	1,837	197	17	64	16	8	45	18	6	15	6	2	38	5	5	East Surrey.
Rotherhithe . . .	690	13,917	2,420	47,814	9,277	15	996	18	8	1,195	7	0	398	9	0	1,394	11	6	Southwark.
Streatham . . .	2,770	5,994	900	34,707	3,330	14	578	9	8	867	13	6	289	4	6	1,012	5	9	East Surrey.
Total . .	14,830	277,596	45,057	885,808	128,399	19	16,291	18	..	22,145	4	0	7,381	14	8	28,437	16	5	

* The remainder of this division of the Hundred of Ossulstone consists of the parishes of Ealing and Willesden, and the extra-parochial precinct of Twyford Abbey.

† Including 2000*l.* borrowed from the treasurer.

‡ The area occupied by the Inns of Court and Chancery is included in the estimated area of the City.

§ This hundred includes also the manor or hamlet of Hatcham, in the parish of St. Paul, Deptford; the rest of which parish is in the hundred of Blackheath, and county of Kent, where the whole of its area, population, &c., are entered. The only other place in the hundred of Brixton not contained in this Table, is the parish of Mortlake, which is properly suburban to the town of Richmond, and belongs to the western division.

Enumeration of the several Wards and Parishes of the Metropolis, &c.—continued.

Name of Parish, Precinct, or Place.	Area in Statute Acres.	Population 1841.	Houses Inhabited 1841.	Rental 1842.	Amount levied by Poor's Rate Assessment 1842.	Payments thereat for or towards the County Rate 1842.	Payments for or towards the Police Rate, 1842.				Parliamentary Borough or District in which each Parish, &c., is included.
							Quota per £.	Three-fourths of Rate payable by Parishes.	One-fourth of Rate payable by Treasury.	Total Payments, including Arrears.	
Western Division of the Hundred of Brixton:				£.	£. s.	£. s.		£. s. d.	£. s. d.	£. s. d.	
Barnes	820	1,461	238	7,368	676 1	122 16	8	184 4 0	61 8 0	245 12 0	East Surrey.
Battersea . . .	2,180	6,617	1,090	33,500	3,391 9	558 7	8	837 10 0	279 3 4	1,116 13 4	East Surrey.
Merton	1,540	1,914	323	6,406	888 13	273 8	8	160 3 0	53 7 8	213 10 8	East Surrey.
Putney, with Roehampton . . .	2,280	4,684	809	26,229	3,027 0	420 10	8	630 14 6	210 4 10	1,156 6 7	East Surrey.
Tooting	680	2,840	339	7,607	1,225 18	116 16	8	175 3 6	58 7 10	145 19 7	East Surrey.
Wandsworth . . .	1,820	7,614	1,315	29,815	5,564 12	496 18	8	745 7 6	248 9 2	1,366 10 5	East Surrey.
Wimbledon . . .	3,700	2,630	435	14,655	2,791 0	244 4	8	366 7 6	122 2 6	488 10 0	East Surrey.
Total . .	13,020	27,760	4,549	123,980	17,564 13	2,232 19	..	3,099 10 0	1,033 3 4	4,733 2 7	
Total "Surrey"	28,440	403,454	63,451	1,318,853	291,151 3	22,371 19	..	32,971 6 6	10,990 8 10	43,780 7 10	
County of Kent.											
Hundred of Blackheath:											
Charlton	1,250	2,655	441	15,559	1,088 9	392 13	8	388 19 6	129 13 2	388 19 6	Greenwich and West Kent.

Deptford, St. Nicholas	1,700	6,991	1,095	10,570	4,397 15	154 13 8	264 5 0	88 1 8	352 6 8	Greenwich.
Deptford St. Paul, with the Hamlet of Hatcham . . .		18,626	3,371	48,200	8,486 17	571 3 8	1,205 0 0	401 13 4	1,405 16 8	
Eltham,	4,280	2,186	392	11,435	1,310 6	418 7 8	285 17 6	95 5 10	381 3 4	West Kent.
Mottingham Hamlet		124	19	1,813	99 0	59 16 8	45 6 6	15 2 2	60 8 8	
Greenwich . . .	2,030	29,755	4,495	91,347	11,765 8	842 12 8	2,283 13 6	761 4 6	2,664 5 9	Greenwich.
Kidbrooke Liberty .	480	597	75	5,566	166 6	122 2 8	139 3 0	46 7 8	185 10 8	West Kent.
Lee	1,470	2,360	401	10,409	603 7	282 2 8	260 4 6	86 14 10	346 19 4	
Lewisham . . .	5,220	12,276	2,119	51,590	3,977 19	1,427 4 8	1,289 15 0	420 18 4	1,719 13 4	
Plumstead . . .	3,100	2,816	519	11,010	1,441 11	421 10 8	275 5 0	91 15 0	367 0 0	Greenwich and West Kent.
Woolwich . . .	840	25,785	3,034	40,372	10,214 11	453 0 8	1,009 6 0	336 8 8	1,345 14 8	Greenwich.
Total "Kent"	20,370	104,171	15,961	297,871	43,551 9	5,145 2 ..	7,446 15 6	2,473 5 2	9,217 18 7	
Metropolitan Police on Duty on Census Night	..	2,930	..	..	..	..	..	..	..	
Total of the Metropolis	83,800 or 130⅔ miles.	1,961,810	265,203	8,082,369	877,666 18	111,938 13 ..	207,202 15 3½	68,161 15 4	259,779 16 8	

The above are the civil divisions of the metropolis, which are at the basis of almost all the others; and the chief purpose of the following pages is to describe the various modes in which they are combined for different purposes of local government. Districts for the purposes of paving, lighting, &c., are, however, sometimes carved out of these primary divisions, and placed under local boards, distinct from the parochial authorities or any placed over them.

The principal parochial and other trusts regulating the paving, lighting, and cleansing of their several districts, which made returns of their expenditure to Parliament in 1813 and 1825, are the following:—In the *West* of London, those of the parishes of St. Clement Danes; St. Mary-le-Strand; St. Martin in the Fields; St. Paul, Covent-garden; St. George, Hanover-square; St. James, Westminster; St. Margaret, Westminster; St. John the Evangelist, Westminster; St. Anne, Westminster; St. Marylebone; and the Savoy Precinct; with the minor districts of the South-west of St. Pancras; Grosvenor-square; Berkeley-square; part of St. John's, Westminster; and the dispersed streets, eight in number, under the direct management of the Commissioners for Paving, &c., in Westminster, under the 11th George III., c. 22:—in the *North* of London, those of the parishes of St. Andrew, Holborn above Bars; St. George the Martyr, Middlesex; St. Sepulchre, Middlesex; St. Bartholomew the Great and Less; St. Giles in the Fields, and St. George, Bloomsbury; St. John, Clerkenwell; St. James, Clerkenwell; St. Luke's, Middlesex; St. Mary, Islington; St. Leonard, Shoreditch; and Christchurch, Spitalfields; with the minor districts of Red Lion-square; Charter House-square; the Rolls Liberty; Ely-place, Holborn; Middle-row; and the Liberty of Saffron-hill, Hatton-garden and Ely-rents:—in the *East* of London, those of the parishes of Trinity Minories, Christchurch, Middlesex; St. Mary, Whitechapel; St. Paul, Shadwell; St. Anne, Limehouse; St. John, Wapping; All Saints, Poplar; Hackney; St. Matthew, Bethnal-green; St. George in the East; St. Botolph Without Aldgate; the hamlets of Ratcliffe, Mile-end Old Town, and Mile-end New Town; the precinct of St. Catherine; the Liberty of Norton Folgate; and the minor districts of the Old Artillery-ground; Church-lane; Goodman's-fields; Ratcliffe-pavement; Wapping-pavement; Shoreditch High-street; the Commercial-road; Rosemary-lane; Whitechapel High-street; and Whitechapel-road Side:—and in the *South* of London, those of the parishes of Christchurch and St. Thomas, and the Clink Liberty, together with the East and West Divisions of Southwark.*

A subsequent return, in March 1831, including the suburban turnpike roads, adds nearly 60 to the above list of trusts, levying rates and tolls upon the inhabitants, and having a separate and independent management; being the greater number of those independent of parochial limits, viz.:—

Parliament-street, Bridge-street, Old and New Palace Yard.
Tothill Fields District, St. Margaret, & St. John.
Milbank Road.
Vauxhall Bridge Road.
Grosvenor Place Trust.
Regent-street, Regent's Park, and Carlton Terrace.
Interior of St. James's Park.
St. James's Square Trust.
St. James's Burial Ground, Hampstead Road.
Calthorpe Estate.
Upper Liberty of St. Andrew, Holborn.
Doughty Estate.
Foundling Estate.
Swinton Estate.
South-west District.
Southampton Paving.
Bedford Estate.
Skinners' Estate.
Lucas Estate.
Harrison Estate.
Battle Bridge.
Somers' Town.
Brewer's Estate.
Pancras Union Estates.
Camden Town.
Hamlet of Kentish Town.
Hamlet of Highgate.
Holmes' Estate.

* Sess. 1813-14, No. 355. Sess. 1825, No. 240.

St. John's District of Clerkenwell.
Charter House Square.
Mile-End Road Trust.
Commercial Road Trust.
East India Docks.
West India Docks.
London Docks.
St. Catherine's Docks.
Hans Place.
Hans Town.
Lincoln's-Inn-Fields.
Waterside Division.
Grange Road Division.
Russell-street Division.
Long-lane Division.
Camberwell New Trust.
Camberwell Old Trust.
Peckham Old Trust.
Clapham Road Trust.
Kent Road Trust.
Surrey New Road Trust.
Wandsworth Road Trust.
Lambeth Wyke Trust.
Lambeth Improvement Act Trust.
Brixton Road Trust.
Walworth Road Trust.
Holland-street Trust.
Upper Ground-street Trust.
South District of St. George.

The local statutes, under which all these petty corporations act, are far too voluminous and uninteresting for present dissection. The general constitution of such bodies, their endowment with powers to levy rates or tolls upon the public, and their ordinary encumbrance with debts incurred on the faith of such powers, are too well known to need explanation; while the differences between one and another of them, though very great, will not command attention, because of the comparative insignificance of each taken separately.

Nor are these the only local authorities. The Commission of Metropolis Roads, under the 7th of George IV. c. 142, has the management of the roads, formerly under 14 different trusts, on the north side of the Thames. There are commissions of sewer, pervading the whole metropolis, with powers of express taxation. The several water and gas companies are in effect corporations for particular purposes, which, through inevitable monopoly, possess an unlimited power of taxation. And the Building Act has its own officers under the magistracy.

The ancient military organization of the City of London is now extinct. The office of Lord-Lieutenant is not vested in an individual, but in a commission issued by the Crown. The Court of Lieutenancy thus constituted has been accustomed to assess a rate on the several wards for the maintenance of a staff of the train-bands; but except a pensioner or two, there now remains no vestige even of this staff. The rate was levied about once every three years on each ward, and apportioned among the rate-payers by the ward councilmen. An account of the assessment was printed with the City accounts in each year that it was laid; but the corporation had no concern with or control over its expenditure.

London now exercises its political influence, not by the arms of a *posse civitatis*, or those of its train-bands, but through a national public opinion, of which it is the centre, and through the constitutional agency of its representatives in parliament, of whom four are still sent, in accordance with ancient custom, by the City of London; two each by the City of Westminster and the Borough of Southwark, which latter has had its limits enlarged by the late Act to amend the representation; and two by each of the new metropolitan boroughs created by that Act, viz., Finsbury, Lambeth, Marylebone, Tower Hamlets, and Greenwich; making a total of 18 members, besides the share which the western suburbs have in the franchises of Middlesex and East Surrey. The following are the limits assigned to the several metropolitan boroughs by the Parliamentary Boundary Act:—

1. London.

The whole space contained within the exterior boundaries of the Liberties of the City of London, including the Inner Temple and the Middle Temple.

2. Finsbury.

The several parishes of Saint Luke, Saint George the Martyr, Saint Giles in the Fields; Saint George, Bloomsbury; Saint Mary, Stoke Newington; and Saint Mary, Islington; the several liberties or places of Saffron Hill, Hatton Garden, Ely Rents, Ely Place, the Rolls, Glass-House Yard and the Charter House, Lincoln's Inn and Gray's Inn, the parish of Saint James and Saint John, Clerkenwell, except that part thereof which is situate to the north of the parish of Islington; those parts of the respective parishes of Saint Sepulchre and Saint Andrew, Holborn, and of Furnival's Inn and Staple's Inn respectively, which are situated without the liberty of the City of London.

3. Lambeth.

The parish of Saint Mary, Newington; the parish of Saint Giles, Camberwell, except the Manor and Hamlet of Dulwich; and also such part of the parish of Lambeth as is situate to the north of the line herein-after described, including the the extra-parochial space encompassed by such Part:

From the point at which the road from London to Dulwich, by Red Post Hill, leaves the point from London over Herne Hill in a straight line to Saint Matthew's Church at Brixton; thence in a straight line to a point in the boundary between the respective parishes of Lambeth and Clapham, one hundred and fifty yards south of the middle of the carriage way along Acre Lane.

4. Marylebone.

The several parishes of Saint Marylebone, Saint Pancras, and Paddington.

5. Southwark.

The old Borough of Southwark, including the Mint and Manor of Suffolk; the several parishes of Rotherhithe, Bermondsey, and Christ Church; and the Clink Liberty of the parish of Saint Saviour.

6. Tower Hamlets.

The several divisions of the Liberty of the Tower, and the Tower division of Ossulstone Hundred.

7. Westminster.

The old City and Liberty of Westminster and the Duchy Liberty.

8. Greenwich.

From the point at which the Royal Arsenal Canal at Woolwich joins the River Thames, along the said canal to the southern extremity thereof, thence in a straight line to the south-western corner of the Ordnance Storekeeper's house; thence in a straight line, in the direction of a stile in the footpath from Woolwich to Plumstead Common, over Sand Hill, to the boundary of the parish of Woolwich; thence southward, along the boundary of the parish of Woolwich to the point at which the same meets the boundary of the parish of Charlton; thence westward along the boundary of the parish of Charlton to the point at which the same turns southward, near the Dover-road; thence along the Dover-road to the nearest point of the boundary of the parish of Greenwich; thence westward along the boundary of the parish of Greenwich to the point at which the same turns abruptly to the south, close by the Dover-road; thence in a straight line, in a westerly direction, to the nearest point of the boundary of the parish of Greenwich; thence westward along the boundary of the parish of Greenwich to the point at which the same meets the boundary of the parish of St. Paul, Deptford; thence southward along the boundary of the parish of St. Paul, Deptford, to the point at which the same meets the River Thames; thence along the River Thames to the point first described.

The local authorities having express municipal limits, have been enumerated in the order which seemed best to convey an idea of their geo-

graphical importance and relations to each other. But it will now be necessary to adopt an arrangement of them according to their objects, by means of which we may arrive at some conception of them as a whole, leading us to an appreciation of the present municipal divisions of the metropolis, and of the amount and distribution of its local taxation. The objects of municipal government in London, as elsewhere in England, are—1. Police and Justice; 2. Public Works and Buildings; and, 3. Public Instruction and Charity.

I. *Police and Justice.*—The Criminal Justice and Police of the Metropolis are virtually in the hands of the Central Government, which issues the Commission for holding the Central Criminal Court, and the Commissions of the Peace for Westminster, the Tower, Middlesex, Surrey, and Kent; appoints the Police Magistrates; and has the direct management of the Police Force, through the agency of the Commissioners in Whitehall Place. The only exception is the City, which has the management of its own police, and an elective magistracy, who take an inferior part in the business of the Central Criminal Court. The jurisdiction of the Central Criminal Court comprises the whole of the Metropolis, as now defined, together with the remainder of Middlesex, the parishes of Richmond and Mortlake in Surrey; and a considerable tract in Essex; that of the several courts of general or quarter sessions is coterminous with the counties or liberties for which they are held; and that of the several police courts extends through the districts hereafter described, which have been severally assigned to them, in the City by the Court of Aldermen, and without its limits by the Queen in Council. For administrative purposes of police the metropolis is subdivided into districts indicated by the letters of the alphabet, in the City by the Commissioner, under the Court of Aldermen, and elsewhere by the Commissioners under the Secretary of State for the Home Department. The courts at Westminster are the courts of civil jurisdiction most resorted to; those of the City, possessing unlimited jurisdiction, have no authority beyond its limits; the several Small Debt Courts are likewise confined, by their several Acts of Parliament, within specific bounds; but the county courts have a more general application, and those of Middlesex are now held in several places, with an enlarged jurisdiction and improved process.

II. *Public Works and Buildings.*—Nearly the whole of the public works are in the hands of local if not of representative authorities. The drainage is divided among commissions of sewers, issued by the Crown, like commissions of the peace; the streets and roads are in the charge of the parish vestries, local boards and trusts, and the Commissioners of the Metropolitan Roads; the supply of water and of gas by the several companies is also a matter of territorial division under monopoly conventions; districts for the inspection of buildings in course of erection are appointed by the magistrates; but such works as markets, exchanges, approaches, bridges, cemeteries, the river navigation, &c. (in the hands of the corporation, of companies, and of large proprietors) have, of course, no reference to municipal divisions.

III. *Public Instruction and Charity.*—Public instruction, except of paupers, is not a matter of municipal provision; but the division of the metropolis for poor-law administration, with which that for the registration of births, deaths, and marriages coincides, is one of paramount importance. Its largest charitable endowments are irrespective of locality; but a great amount of gifts is devoted to the relief of the poor in par-

ticular parishes and places. Owing to the number of parishes having local Acts for the management of their poor, and other causes, however, the metropolitan system of parochial relief is on no general and well organized plan, and the districts in use are irregular in the extreme.

I. Police and Justice.

Criminal Jurisdiction.

The limits of the jurisdiction of the Central Criminal Court, and those assigned to the several sessions of the peace, have already been described. But the divisions for the purposes of the Police Courts, and those for police administration, require especial notice.

The City is divided into six police districts, in each of which there is a station-house; for the First Division, in Moor-lane; for the Second, in Smithfield; for the Third, in Blackhorse-court; for the Fourth, in Watling-street; for the Fifth, by the Tower; and, for the Sixth, in Bishopsgate Churchyard; each district being divided into sections, and each section into day or night beats, like those of the Metropolitan Police without the City. The area occupied by these districts is, as already described, only 600 acres; and their population, in 1841, was only 123,752.

The following table will show the distribution into police districts of the whole metropolis without the City, with the area, population, and station-houses of each. The districts are not regarded in the population abstract of the recent Census; and the proportion in which the several parishes are divided, when not wholly included in one or other of them, has therefore been made the subject of a rough estimate upon a map of the several districts. The wards into which they throw the metropolis are convenient for forming some estimate of the larger divisions for purposes of justice and public works. Attached to those externally situated are dependent rural districts, forming integral portions of them for all purposes of police, and extending in every direction to a distance of 15 miles from Charing-cross, or rather including all the parishes and places whose churches are situated within that distance.

In each division there is one superintendent, from two to six inspectors, from 14 to 30 serjeants, and a number of men varying with the exigencies of each locality. The dependent rural districts were attached subsequently to the first organization of the metropolitan police, and are managed without any increase of the superintending establishments. In the City, and in many other localities, the inhabitants still, however, subscribe to maintain a number of private watchmen, under their own direction and control, for the sake of enjoying a more familiar use of their services, and a feeling of greater security from their half domestic character. There are also in London two Societies, which, through philanthropic motives, form a voluntary police for the enforcement of particular statutes, viz., the Society for the Suppression of Vice, and the Society for the Suppression of Cruelty to Animals.

Division of the Metropolis without the City among the several Police Districts; showing the Parishes, parts of Parishes, and Places, included in each Division: specifying, in regard to each Parish, its approximate Area, Population, and the Estimated Distance of the Parish Church from Charing-cross.

Letter of Division	Locality.	Parishes, &c. in each Division.	Estimated Area in Acres.	Population, 1841.	Estimated Distance of the Parish Church from Charing Cross.	Police Stations.
A.	Whitehall . .	St. Margaret's, part of (See B.)	250	2,258	½ a mile .	Great Scotland-yard. Whitehall. 2, Gardner's-lane.
		St. Martin's, part of (See F)	200	5,190	80 yards .	
		St. James's, Hyde and Green Parks	400*	..	. .	
		Buckingham Palace . . .				
		Houses of Parliament . .				
			850	7,448		
B.	Westminster .	St. Margaret's, part of (See A.)	380	28,000	½ a mile .	New Way, Tothill-street. Roberts-buildings. Ebury-square.
		St. John's.	210	26,223	¾ of a mile	
		St. George's, part of (See C.)	200	30,000	. .	
		St. Luke's, Chelsea, part of (See V.)	280	15,000	2¾ miles .	
		Collegiate Close of St. Peter	..	231	½ a mile .	
			1,070	99,454		
C.	S. James's . .	St. James's, Westminster .	165	37,398	640 yards .	Little Vere-street, Piccadilly.
		St. Ann's, Soho	55	16,480	½ a mile .	
		St. George's, part of (See B.)	400	36,453	¾ of a mile	
		St. Martin's, part of (See F.)	28	6,500	. .	
			648	96,831		
D.	Marylebone .	St. Mary-le-bone, part of (See E.)	1,290	108,164	1¾ mile . .	Marylebone-lane. 5, Little Harcourt-street. Hermitage-street, Paddington.
		Paddington	1,110	25,173	3 miles . .	
			2,400	133,337		
E.	Holborn . . .	St. George's, Bloomsbury .	125	16,981	¾ of a mile	George-street, St. Giles's. Hunter-street, Brunswick-square.
		St. George-the-Martyr, and St. Andrew's, part of (See F.)	100	22,897	1 mile . . 1½ mile .	
		St. Pancras, part of (See S.)	300	29,763	1½ mile . .	
		St. Giles's, part of (See F.) .	50	15,000	½ a mile .	
		St. Mary-le-bone, part of (See D.)	200	30,000	1¾ mile . .	
		Gray's-inn	. .	325	1 mile . .	
			775	114,966		
F.	Covent-garden	St. Martin's, part of (See A.)	40	13,500	80 yards .	34, Bow-street.
		St. Giles's, part of (See E.) .	75	22,311	½ a mile .	
		St. Clement Danes	52	15,459	¾ of a mile	
		St. Andrew, Holborn, part of (See E.)	20	6,438	1½ mile . .	
		St. Mary-le-Strand	16	2,520	¾ of a mile	
		St. Paul, Covent-garden . .	26	5,718	½ a mile .	
		Precinct of the Savoy . . .	4	414	½ a mile . .	
		Liberty of the Rolls	10	2,565	. .	
		Lincoln's-inn	. .	107	. .	
			243	69,032		
G.	Finsbury . .	Clerkenwell, part of (See N.)	280	50,000	1¾ mile . .	Rosomon-street, Clerkenwell. Featherstone-street, St. Luke's.
		St. Luke, part of (See N.) .	220	45,000	2½ miles .	
		St. Sepulchre Without . . .	20	4,301	2 miles . .	
		Liberty of Saffron-hill, &c. .	40	9,455	2 miles . .	
		Liberty of Norton Folgate, part of (See H.)	2	474	3 miles .	
		Charter House	. .	185	. .	
		Glasshouse-yard Liberty . .	8	1,415	. .	
		Furnival's and Staple's Inn	. .	245	. .	
			570	111,575		

* Besides what is included in the parishes of St. Martin and St. Margaret; being portions of St. George's, Hanover-square, and Paddington.

Divisions of the Metropolitan Police District—continued.

Letter of Division	Locality.	Parishes, &c. in each Division.	Estimated Area in Acres.	Population, 1841.	Estimated Distance of the Parish Church from Charing Cross.	Police Stations.
H.	Whitechapel .	St. Leonard, Shoreditch, part of (See N.)	20	3,432	3½ miles .	Church street, Spitalfields. Denmark-street, St. George's East.
		Christchurch, Spitalfields .	70	20,436	3 miles . .	
		St. Matthew, Bethnal-green part of (See K, N.) . .	160	20,000	3½ miles .	
		Whitechapel, part of (See K.)	140	30,000	3 miles . .	
		Trinity, Minories	. .	579	3 miles . .	
		Tower Within	24	1,107	3 miles .	
		Tower Without		310		
		St. Botolph Without, Aldgate	32	3,627	2¾ miles .	
		St. Katherine's	14	96	. .	
		Mile-end New Town, part of (See K.)	30	325	3¼ miles .	
		Norton Folgate, part of (See G.)	8	1,200	3 miles . .	
		Old Artillery-ground	6	1,558	. .	
			504	82,670		
K.	Stepney . . .	St. John, Hackney, part of (See N.)	20	771	5¼ miles .	Devons-lane, Bromley. Green Bank and King David's lane, Mile-end.
		St. Matthew, Bethnal-green, part of (See H, N.) . .	560	50,000	3½ miles .	
		Whitechapel, part of (See H.)	20	4,053	3 miles . .	
		St. George's, East	230	41,350	3¼ miles .	
		Mile-end New Town, part of (See K.)	2,100	51,308	3¼ miles .	
		Mile-end Old Town			4 miles .	
		Hamlet of Ratcliff	. .	11,874	4 miles . .	
		St. Ann, Limehouse	280	19,337	5½ miles .	
		St. John, Wapping	38	4,108	3½ miles .	
		St. Paul's, Shadwell	70	10,060	3½ miles .	
		All Saints, Poplar	*	20,342	6½ miles .	
		St. Leonard, Bromley . . .	620	6,154	5¼ miles .	
		Stratford-le-Bow	630	4,626	5 miles . .	
			4,568	223,983		
L.	Lambeth . . .	Christchurch, part of (See D.)	40	6,616	1¾ mile . .	Tower-street, Waterloo-road. High-street, near the Old Church.
		Lambeth, part of (See V.) .	640	50,000	1¼ mile . .	
		St. George, part of (See M.)	100	10,644	2 miles . .	
		Newington, part of (See P.)	230	20,000	2¼ miles .	
			1,010	87,260		
M.	Southwark . .	St. George, part of . . .	400	36,000	2 miles . .	4, Southwark Bridge-road. Paradise-street, Rotherhithe.
		St. John		10,115	2½ miles .	
		St. Olave		6,745	2 miles . .	
		St. Saviour and Clink Liberty		18,219	2 miles . .	
		St. Thomas		1,759	2 miles . .	
		Christchurch, part of (See K.)		8,000	2 miles . .	
		Bermondsey	620	34,947	2¾ miles .	
		Rotherhithe	690	13,917	4¼ miles .	
			1,710	129,702		
N.	Islington . . .	St. Mary, Stoke Newington	670	4,490	5 miles . .	High street, Kingsland. Church-street, Hackney. Robert-street, Hoxton. Islington green, Islington. Stoke Newington.
		St. Leonard, Shoreditch, part of (See H.) . . .	600	80,000	3¼ miles .	
		St. Mary, Islington	3,050	55,690	3 miles . .	
		St. John, Hackney (See K.)	3,280	37,000	5¼ miles .	
		St. Luke's, part of (See G.) .	20	4,829	2¼ miles .	
		Clerkenwell, part of (See G.)	40	6,756	1¾ mile . .	
		St. Matthew, Bethnal-green, part of (See H.K.)	40	4,058	3½ miles .	
			7,680	192,823		

* Acreage included with Mile-end, &c.

Divisions of the Metropolitan Police District—concluded.

Letter of Division	Locality.	Parishes, &c. in each Division.	Estimated Area in Acres.	Population, 1841.	Estimated Distance of the Parish Church from Charing Cross.	Police Stations.
P.	Camberwell .	Camberwell	4,570	39,868	3½ miles .	Park House, Lock's-fields, Walworth. Camberwell-green. Brixton-road.
		St. Mary, Newington, part of (See L.)	430	34,606	2¼ miles .	
		Clapham, part of (See V.) .	70	2,106	6 miles . .	
		Streatham, part of (See V.)	2,000	5,000	6 miles . .	
		Norwood, part of, Lambeth (See L, V.)	500	5,888	6 miles . .	
			7,570	87,468		
R.	Greenwich . .	St. Nicholas, Deptford . .	1,700	6,991	5¼ miles .	Blackheath road. Woolwich. Lee road.
		St. Paul, ditto		18,626	5¼ miles .	
		Greenwich	2,030	29,755	6 miles . .	
	In the Outlying District.	Woolwich	840	25,785	10 miles .	
		Plumstead	3,100	2,816	12 miles .	
		Charlton	1,250	2,655	8½ miles .	
		Lee	1,470	2,360	8 miles .	
		Eltham, with Nottingham hamlet	4,280	2,310	10 miles .	
		Lewisham	5,220	12,276	7½ miles .	
		Kidbrook Liberty	480	597	. .	
			20,370	104,171		
S.	Hampstead	St. Pancras	2,300	100,000	1¾ mile . .	High-street, Highgate. Edgeware-road, 8 mile-stone. 52, Albany-street, Regent's-park. Junction-place, Kentish-town. Heath-street, Hampstead. 52, Salisbury-street, Portman-market. Phœnix-street, Somer's-town.
		St. John, Hampstead . . .	2,070	10,093	5 miles . .	
			4,370	110,093		
T.	Kensington .	Kensington	2,680	23,834	3½ miles .	Kensington. Hammersmith. Brentford. Acton (occasionally).
		Hammersmith	2,140	13,453	5 miles . .	
		Chiswick	1,120	5,811	6½ miles .	
		Acton	2,260	2,665	7¼ miles .	
			8,200	48,763		
V.	Wandsworth .	Putney with Roehampton .	2,280	4,684	5½ miles .	The Plain, Wandsworth. Milman's-row, Chelsea. Clapham-common. Salvador, Lower Tooting. Merton. Priest-bridge, Barnes.
		Barnes	820	1,461	6 miles . .	
		Wandsworth	1,820	7,614	6 miles . .	
		Battersea with Penge . . .	3,020	6,887	4½ miles .	
		Clapham, part of (See P.) .	1,000	10,000	4 miles . .	
		Lambeth, part of (See L, P.)	2,500	60,000	1¼ mile . .	
		Streatham, part of (See P.)	770	994	6 miles . .	
		Fulham	1,820	9,390	5 miles . .	
		St. Luke's, Chelsea, part of (See B.)	500	25,179	2¾ miles .	
		Tooting	680	2,840	7¼ miles .	
	In the Outlying District.	Merton	1,540	1,914	9 miles . .	
		Wimbledon	3,700	2,630	9 miles . .	
			20,450	133,593		
T. D.	Thames Division	. . .	. .	. .	. . .	Wapping and Blackwall, with the Thames. "Port Mahon," lying off Strand-lane.

From the description of the boundaries of the several police court jurisdictions, contained in the Orders in Council, it appears that—

1. The *Bow-street Police Court* includes under its jurisdiction the Whitehall and Covent-garden Police Divisions (A and F), with the exception of Hyde Park in the first, and the western part of south St. Giles's in the second.

2. The *Queen-square Police Court.*—The Westminster Division (B), and the parish of Chelsea.

3. The *Marlborough-street Police Court.*—The St. James's Division (C), together with Hyde Park and Kensington Gardens, in the Whitehall Division (A), and the western extremity of south St. Giles's, in the Covent-garden Division (F).

4. The *Marylebone Police Court.*—The Marylebone and Hampstead Divisions (D and S), with the remainder of the parish of St. Marylebone, and a small portion of St. Pancras, lying west of Tottenham-court-road.

5. The *Hatton-garden Police Court.*—The Holborn Division (E), with the exception of all portions of St. Marylebone, and of St. Pancras, west of Tottenham-court-road; the Islington Division (N), excepting all parts of Hackney and Shoreditch; and the Finsbury Division (G), excepting any part of St. Luke's.

6. The *Worship-street Police Court.*—The remainder of the Islington and Finsbury Divisions (N and G), together with Bethnal green, Spitalfields, Mile end New Town, and the Old Artillery Ground, in the Whitechapel and Stepney Divisions (H and K).

7. The *Lambeth-street Police Court.*—The Whitechapel Division (H), with the exception above-mentioned, and the whole of the Stepney Division (U), with the exception of the places below enumerated as being attached to the Thames Police Court.

8. The *Thames Police Court.*—Part of the parish of St. George in the East, the hamlets of Ratcliffe and Mile-end Old Town, and the parishes of Bow, Bromley, and Poplar, all in the Stepney Division (K).

9. The *Union Hall Police Court.*—The Lambeth, Southwark, and Camberwell Divisions (L, M, and P), together with Bermondsey, in the Greenwich Division (R).

10. The *Greenwich Police Court.*—The Greenwich Division (R), with the exception of Bermondsey, but with the addition of the outlying parishes of Lee and Lewisham.

11. The *Woolwich Police Court.*—The remainder of the metropolitan parishes of the county of Kent.

12. The *Hammersmith Police Court.*—The Kensington Division (T), with the exception of the parishes of Paddington on the east, and Ealing, including New Brentford, on the west, but with the addition of Fulham, in the Wandsworth Division (V).

13. The *Wandsworth Police Court.*—The Wandsworth Division (V), with the exception of Fulham, but with the addition of Wimbledon and Merton.

The following are the boundaries as expressly described by the Orders in Council:—

Bow-street Police Court.—The space included within the following boundary (that is to say), from the river Thames at the Temple stairs westward along the said river to the north side of Westminster bridge;

thence along the centre of Bridge-street in a straight line to and along the centre of Great George-street to Storey's Gate; thence along the boundary line of St. James's Park to Buckingham Gate; thence along the centre of Stafford-row to and along the centre of Arabella-place, of Lower Grosvenor-place, to Hyde Park Corner; thence eastward along the boundary of the Green Park and St. James's Park (including St. James's palace), to the west side of Spring Gardens; thence along the south and east sides of Trafalgar-square to St. Martin's lane; thence northward along the centre thereof, and of Upper St. Martin's-lane; of Little St. Andrew's-street (including the Seven Dials), of Great St. Andrew's-street; and of King-street to Broad-street; thence eastward along the centre thereof to and along the centre of High Holborn to the boundary of the City of London, and thence southward along the said boundary to the Temple stairs aforesaid.

Queen-square Police Court.—The space included within the following boundary (that is to say), from the south-west side of Westminster Bridge in a line running westward along the centre of Bridge-street to and along the centre of Great George-street to Storey's Gate; thence along the boundary line of St. James's Park to Buckingham Gate; thence along the centre of Stafford row, of Arabella-place, of Lower Grosvenor-place, and of Grosvenor-place to Hyde Park Corner; thence westward along the Knightsbridge-road; thence south-westward along the centre of Queen's-buildings, Brompton-row, and of Michael's-place; thence along the Fulham-road to Sandford Bridge; thence southward along the Kensington Canal to the river Thames; thence eastward along the said river to the south side of Westminster Bridge.

Marlborough-street Police Court.—The space included within the following boundary (that is to say), from the Victoria Gate, Hyde Park, on the Uxbridge-road, in a line running eastward along the centre of the said road, of Oxford-street, of High-street, St. Giles's, and of Broad-street to King-street; thence southward along the centre of King-street, and of Great St. Andrew-street, of Upper St. Martin's-lane, and of St. Martin's-lane to the north-east corner of Trafalgar-square; thence (including the area of the said square) to the south-west corner thereof; thence in a straight line to the west side of Spring Gardens; thence along the boundary of the St. James's and Green Parks to Hyde Park Corner; thence along the Knightsbridge-road to the park gate opposite the Camden Arms public house; thence along the boundary of Kensington Gardens (including Kensington palace and the said gardens) to the Victoria Gate, Hyde Park, on the said Uxbridge-road.

Marylebone Police Court.—The space included within the following boundary (that is to say), on the south by a line commencing at Victoria Gate, Hyde Park, and extending eastward along the centre of the Uxbridge-road, and of Oxford-street; thence northward along the centre of Tottenham-court-road to the New-road; thence north-eastward along the centre thereof to Maiden-lane to the North Cemetery; thence south-westward to and including Kilburn Wells; thence south to Westbourne-green (including the same), and to the Victoria Gate, Hyde Park.

Hatton-garden Police Court.—The space included within the following boundary (that is to say), from the boundary of the City of London on Holborn Hill, in a line running westward along the centre of Holborn, of Broad-street and of High-street; thence northward along the

centre of Tottenham-court-road to the New-road; thence north-eastward along the centre thereof to Maiden-lane; thence northward along the centre of Maiden-lane to Hornsey-lane; thence eastward to Stamford Hill; thence southward to and along Stoke Newington, High-street; thence to and along the centre of the Kingsland-road to the Regent's Canal; thence westward along the same to the New River; thence southward along the centre of Goswell-street to Charterhouse-square; thence along the boundary of the City of London to the corner of Hatton-garden, Holborn Hill.

Worship-street Police Court.—The space included within the following boundary (that is to say) from the boundary of the City of London, at the corner of Goswell-street, running northward along the centre of the same, to the City-road; thence along the centre of Duncan-terrace to the Regent's Canal; thence eastward along the same to the Kingsland-road; thence northward along the centre thereof, and of Stoke Newington, High-street, to Stamford Hill; thence south-eastward to Lea Bridge; thence along the Hackney Cut, to Old Ford-road; thence westward along the centre thereof, to, and including Bethnal-green; thence southward along Dog-row; thence westward to Spitalfields, along the centre of Princes-street and Wentworth-street, to the boundary of the City of London, at the corner of the said last-mentioned-street; and thence along the said City boundary to the corner of Goswell-street.

Lambeth-street Police Court.—The space included within the following boundary (that is to say), from the Tower-stairs, on the river Thames, in a line running northward along the boundary of the City of London, to the corner of Wentworth-street; thence eastward along the centre thereof, and of Old Montague-street, Princes-street, and Northampton-street, to Cambridge-road; thence northward along the centre thereof to Old Ford Bridge; thence to and along Old Ford-road, to and including Bow, and thence to the river Lea; thence southward along the river Lea to the north-east corner of the East India Dock: thence westward along the centre of the East India Dock-road, and of the Commercial-road to the corner of Cannon-street-road; thence southward along the centre thereof, and of Cannon-street to Ratcliffe Highway; thence westward along the centre of the same and of Parsons'-street to East Smithfield; thence southward to and along the centre of Nightingale-lane to Hermitage Dock; thence westward along the boundary of the river Thames to Tower-stairs, including the Tower of London and the Liberty thereof; "also the space within the boundary line hereinafter named (that is to say), a line running northward from the said river Thames, at Hermitage-dock, along Nightingale-lane, to East Smithfield; thence eastward along the centre of East Smithfield, Parsons'-street, Ratcliffe Highway, and High-street, Shadwell, to Fox's-lane; thence southward, along the centre of the said lane, to the river Thames, at the eastern entrance of the London Docks aforesaid; and thence westward along the line of the said river to Hermitage Dock aforesaid."

Thames Police Court.—The space included in the following boundary (that is to say), from the river Thames, at the eastern entrance of the London Docks, in a line running along the north side of the said entrance to Fox's-lane; thence northward along the centre thereof to High-street, Shadwell; thence westward along the centre thereof, and of

Ratcliffe Highway, to Cannon-street; thence northward along the centre of Cannon-street, Cannon-street-road, and the New-road, to the Whitechapel-road; thence eastward along the centre of the said road, and of Mile End-road, to Grove-road; thence northward along the centre thereof to the Eastern Counties Railway; thence eastward along the northern line of the said railway to the river Lea; thence southward along the said last-mentioned river to the river Thames; and thence westward along the boundary of the said river Thames to the said eastern entrance of the London Docks aforesaid.

Union Hall Police Court.—The space included within the following boundary (that is to say), from Dockhead, in a line running northward to the river Thames; thence westward along the said river to Waterloo Bridge; thence southward to Vauxhall Bridge; thence south-eastward to and along the New-road, and Bridge-street, to the Oval at Kennington; thence to and along the New Camberwell-road; thence eastward to and along Church-street, Camden-terrace, Paradise-place, and High-street, and thence to Ebenezer-place; thence northward to and along Pomeroy-street, to the Dover-road; thence to and along the Kent-road to the boundary line between the parishes of Rotherhithe and Bermondsey; and thence along the said boundary to the river Thames, and thence along the river to Dockhead aforesaid.

Greenwich Police Court.—The parishes of Greenwich, St. Nicholas Deptford, that part of St. Paul's Deptford which is within the county of Kent; the parishes of Lewisham and Lea, in the county of Kent; and Rotherhithe; that part of St. Paul's Deptford which is within the county of Surrey, and the hamlet of Hatcham, in the county of Surrey.

Woolwich Police Court.—The parishes of Plumstead, Woolwich, Charlton, Eltham, the liberty of Kidbrooke, and the hamlet of Nottingham, in the county of Kent.

Hammersmith Police Court.—The parishes of Fulham and Kensington (including so much of Brompton as has not been assigned by any Order in Council to the police court, called "Queen-square Police Court," and such part of the parish of St. Margaret, Westminster, as adjoins the hamlet of Hammersmith, and also that portion of the parish of Chelsea, commonly called Kensall-green, situate to the north side of the said parish of Kensington), the hamlet of Hammersmith; and the parishes of Acton and Chiswick, in the county of Middlesex.

Wandsworth Police Court.—The parishes of Wandsworth, Putney, Battersea, Tooting, Merton, Wimbledon, Roehampton, Barnes, and Clapham, together with so much of the parish of Streatham as comprises Upper Tooting and Balham Hill, in the county of Surrey.

Civil Jurisdiction.

The local courts of civil jurisdiction in the metropolis, besides the Palace Court, the County Court of Middlesex, with its improved jurisdiction, the Mayor's and Sheriffs' Courts in the "City," and the Bailiff's Court of Record in the "Borough," are the Courts of Conscience or Courts of Requests. These are the only courts for which the metropolis is nearly throughout divided into districts. The most ancient is that of the "City," and its jurisdiction does not extend beyond the bounds of that central district. Next after this was established the Court of Re-

quests for Southwark, the jurisdiction of which extends over the whole of the Eastern Half Hundred of Brixton. On the west it meets that of the Wandsworth Court of Requests, which comprises the whole of the Western Half Hundred of Brixton, and on the east that of the Greenwich Court, which comprises the Kentish portion of the metropolis. To the north of the Thames, without the city's limits, the western portion of the town is included within the jurisdiction of the Westminster Court of Requests; the eastern, under that of the Tower Hamlets; and the north-eastern, under that of an old manorial court, regulated by charter and statute, which is held at Hackney.

II. Public Works.

Sewerage.

For the purposes of drainage, the metropolis is placed under the jurisdiction of seven different Commissions of Sewers, the limits assigned to each of which are hereinafter stated. The sums expended give the nearest approximation to the yearly income of these Commissions, which generally make their levies at intervals of several years, so that the returns of any one year afford but very imperfect data for estimating their average income. The direct taxation for sewers thus estimated, appears to be little, if anything, short of 100,000*l.* per annum.

The details relating to the drainage of the town, originally comprised in this paper, will now, however, be found in the following, on the Sewerage of the Metropolis, which the writer was requested to prepare against the meeting of the 18th of March last, in enlargement of this branch of his subject, upon which the attention of the public is now so anxiously fixed.

Paving, Lighting, and Cleansing.

Every portion of the metropolis is necessarily included under some trust for the purposes of paving, lighting, and cleansing; but of the limits assigned to such trusts as are not parochial, we are without any information whatever. Their income and expenditure are equally unknown, and a great service would be rendered by any member of Parliament who should move for returns in detail, by which means the proceedings of the whole would be brought under public cognizance. Some idea of the vast sums which annually pass through their hands may be formed from the cost of paving, cleansing, and lighting in the city alone, for which the sum raised by rates, in the year ended September, 1842, was 35,098*l.* 2*s.* 6*d.*, and the sum expended 41,945*l.* 6*s.* 7*d.* Supposing that the average expenditure on these objects in the rest of the metropolis were only one-half what it is in the city, in proportion to the population, it would amount to no less than 329,500*l.*, making a total in the metropolis of about 371,500*l*; and it may safely be estimated at 400,000*l.*

Supply of Water.

The metropolis is supplied with water by nine principal and two smaller companies, whose districts of supply are described below. Subjoined is also a table of the water rental of the eight largest, and of their

expenditure, in 1833, as returned to Parliament in the year following. Supposing that the ninth of any magnitude, viz., the Kent Waterworks, to have had a water rental equal to that of the Southwark Waterworks, the total water rental of the principal works, in 1833, must have been about 292,400*l.*; and, supposing the water rental in 1843 to bear the same proportion to the population of the metropolis in 1841, that the water rental of 1833 did to its population in 1831, we find the probable amount of last year's water rental to have been 344,238*l.*

New River Waterworks.—All the metropolis north of the Thames from Charing-Cross, Tottenham Court-road, and the Hampstead-road on the west, to the Tower, Shoreditch, and the Kingsland-road, with Dalston, on the east.

East London Waterworks.—All those portions of the metropolis and its suburbs which lie to the east of the City, Shoreditch, the Kingsland-road, and Dalston, together with outlying hamlets in the county of Essex, as far as West Ham.

Chelsea Waterworks.—The parishes of St. John and St. Margaret, Westminster; and the contiguous suburban parishes and places, which lie to the south and west of Charing-Cross, Pall-Mall, St. James's-street, Park-lane, and the Uxbridge road, as far as Kensington Palace, Brompton, and Chelsea.

Grand Junction Waterworks.—The great square of town included by Oxford-street, Princes-street, St. James's Park, the Green Park, and Hyde Park; the Park-square districts, between the Edgeware-road, the Uxbridge-road, and the Regent's Canal, and a considerable district in the angle between the western end of Oxford-street, and the southern end of the Edgeware-road.

West Middlesex Waterworks.—All lying west of the Tottenham Court-road and the Hampstead-road, and north of Oxford-street, the Edgeware-road, and the Regent's Canal, from the point at which the latter reaches it westward, with the exception of the district in the angle formed by Oxford-street and the Edgeware-road, which is supplied by the Grand Junction Waterworks. Likewise Bayswater, and the suburban parishes of Kensington, Fulham, Hammersmith, and Chiswick.

Southwark Waterworks.—The greater part of the borough of Southwark.

Lambeth Waterworks.—A large portion of the parishes of Lambeth, Newington, and Bermondsey.

South London, or Vauxhall Waterworks.—The outer portions of the metropolis, south of the Thames, and east of the Ravensbourne.

Kent Waterworks.—Parts of the parishes of Rotherhithe, Deptford, St. Paul and St. Nicholas Greenwich, and Woolwich.

Hampstead Waterworks.—These are old works which supply a small district about Kentish Town.

Paddington Waterworks.—These are some springs belonging to the Bishop of London's estate, which supply the immediate neighbourhood.

Receipts and Expenditure of the several Water Companies of the Metropolis, in the Year 1833.*

RECEIPTS.

	£.	s.	d.
New River	104,909	6	4
East London	53,061	10	0
Chelsea	22,906	0	0
Grand Junction	26,154	9	0
West Middlesex	45,500	0	0
Southwark	7,850	0	0
Lambeth	14,808	0	0
South London	9,000	0	0
Kent	..		
	£284,189	5	4

EXPENDITURE.

	£.	s.	d.
New River	61,163	1	3
East London (besides 31,717*l.* 2*s.* 6*d.* on extraordinary works)	15,080	0	0
Chelsea	17,981	0	0
Grand Junction (exclusive of reserve and filtration)	11,000	0	0
West Middlesex (exclusive of reserve)	18,000	0	0
Southwark	..		
Lambeth	6,500	0	0
South London	4,000	0	0
Kent	..		
	£133,724	1	3

III. PUBLIC INSTRUCTION AND CHARITY.

Parochial Endowments and Assessments.

The statistics of Public Instruction and Charity in the metropolis, in so far as they are left to parochial endowments and poor law assessments, are contained in the following tables. But, besides the sums which there appear, general charities to the amount of 297,946*l.* 17*s.* 11½*d.* per annum, according to the statements of the Charity Commissioners, are vested in the corporation and other trustees, including the gifts vested in the Companies, and the Royal or Corporation Hospitals. Of this amount, 70,655*l.* 16*s.* 5*d.* is expended upon educational purposes; and 227,291*l.* 1*s.* 6½*d.* in the relief of physical suffering and pecuniary distress in various forms. We have, however, no complete statements of the voluntary gifts of the Corporation and the several Companies, which are very large; of the noble voluntary charities of the metropolis, of general application; and of the numerous voluntary, parochial, and congregational charities.

* Abstracted from Returns contained in the Reports on the Supply of Water to the Metropolis in 1834.

Number of Houses, Annual Value of the Charitable Bequests, and Sums raised by and expended out of the Poor's Rates, in each Parish of the City of London; derived from the Census of 1841, *the Returns to the Poor Law Commissioners for the Year ended at Lady-day,* 1842, *and the Abstracts of the Charity Commissioners' Reports, printed in* 1843. *(The letters prefixed to the names of the Parishes show, by their repetition, those which are united for Ecclesiastical purposes.)*

		Names of Parishes and Precincts.	Houses Inhabited, Uninhabited, and Building, 1841.	Annual Value of the Charitable Bequests, besides such as may be vested in the Corporation, Companies, and Royal Hospitals.	Total Amount of Money levied by Assessment for the Poor, 1842.	Received from all other Sources in aid of Poor Rate, 1842.	Total Amount received for the Relief, &c. of the Poor, 1842.	Amount expended in Relief, &c. of the Poor, 1842.	Total Parochial Rates, &c. expended, 1842.
		City of London Union—being the City within the Walls.		£. s. d.	£. s.	£. s.	£. s.	£. s.	£. s.
1	C	Albans, St., Wood-street	93	393 0 0	586 0	0 16	586 16	563 9	575 2
2		Allhallows, Barking	255	283 13 2	2,165 14	23 15	2,189 9	1,772 16	2,008 8
3	A	Allhallows, Bread-street	70	690 12 2	454 13	0 7	454 13	362 12	369 0
4	B	Allhallows, the Great	145	56 0 8	859 17	. .	833 10	787 6	820 10
5	Y	Allhallows, Honey-lane	25	. .	266 19	. .	267 6	271 1	275 10
6	B	Allhallows, the Less	28	6 16 6	197 6	. .	197 6	156 2	220 11
7		Allhallows, Lombard-street	100	27 4 0	717 1	11 10	717 1	774 8	785 2
8		Allhallows, London Wall	246	171 0 0	1,064 2	81 4	1,075 12	1,181 3	1,231 18
9		Allhallows, Staining	120	414 12 10	697 14	23 13	778 18	691 2	710 1
10		Alphage, St., Sion College	136	194 16 0	537 8	. .	537 8	519 13	576 2
11	S	Andrew, St., Hubbard	48	7 5 6	237 10	. .	237 10	275 12	286 4
12		Andrew, St., Undershaft	183	585 8 4	610 0	. .	610 0	847 7	869 7
13	F	Andrew, St., by the Wardrobe	90	235 3 2	467 10	5 10	473 0	440 8	470 4
14	D	Anne, St., and Agnes, within Aldersgate	59	994 0 2	277 7	4 0	281 7	342 3	386 11
15	F	Anne, St., Blackfriars	286	21 6 8	1,627 6	47 16	1,675 2	1,695 3	1,823 17
16	G	Antholin, St.	62	. .	286 1	32 10	318 11	253 2	328 2
17	E	Augustine, St.	39	272 10 0	388 0	. .	388 0	386 15	411 6
18		Bartholomew, St., by Royal Exchange	65	128 10 11	570 10	3 17	574 7	785 19	833 6
19		Bennet, St., Fink	97	31 12 0	579 19	. .	579 19	603 2	604 4
20	H	Bennet, St., Gracechurch	52	163 12 1	433 19	0 5	434 4	327 6	342 11

Number of Houses, Amount of Charitable Bequests, Poor's Rates, &c.—continued.

		Names of Parishes and Precincts.	Houses Inhabited, Uninhabited, and Building, 1841.	Annual Value of the Charitable Bequests, besides such as may be vested in the Corporation, Companies, and Royal Hospitals.	Total Amount of Money levied by Assessment for the Poor, 1842.	Received from all other Sources in aid of Poor Rate, 1842.	Total Amount received for the Relief, &c. of the Poor, 1842.	Amount expended in Relief, &c. of the Poor, 1842.	Total Parochial Rates, &c. expended, 1842.
		City of London Union—*continued.*		£. s. d.	£. s.	£. s.	£. s.	£. s.	£. s.
21	I	Bennet, St., Paul's Wharf . . .	81	282 1 0	578 6	4 18	583 4	555 5	596 12
22	GG	Bennet, St., Sherehog	29	. .	144 10	0 5	144 15	156 17	165 9
23	M	Botolph, St., Billingsgate . . .	37	50 8 8	121 12	. .	121 12	137 1	174 4
24	K	Christchurch, Newgate-street . .	286	188 15 3	1,846 13	34 1	1,880 14	2,245 8	2,263 11
25		Christopher-le-Stocks, St. . . .	2	52 5 6	120 0	. .	120 0	138 16	176 9
26	V	Clement, St., Eastcheap	40	550 13 6	. .	78 18	78 18	122 1	122 14
27		Dionis, St., Backchurch	122	192 10 0	1,007 0	0 6	1,007 6	955 7	971 8
28		Dunstan-in-the-East, St.	187	2,408 8 3	1,193 7	25 12	1,218 19	1,235 13	1,249 5
29	L	Edmund the King, St.	68	745 4 0	248 5	. .	248 5	249 21	272 17
30		Ethelburga, St..	87	137 10 0	477 15	1 13	479 8	459 9	471 5
31	E	Faith the Virgin, St., under St. Paul's	141	5 0 0	629 12	. .	629 12	740 15	751 8
32	R	Gabriel, St., Fenchurch-street . . .	66	35 10 0	471 16	4 7	476 3	486 11	515 8
33	M	George, St , Botolph-lane	39	. .	141 10	51 10	193 0	170 13	171 6
34	CC	Gregory, St., by St. Paul's . . .	186	11 17 10	160 1	12 1	1,172 2	1,138 6	1,185 5
35		Helen, St., Bishopsgate	132	191 18 10	490 0	. .	490 0	418 15	431 2
36		James, St., Duke's-place	123	23 0 0	274 0	. .	274 0	386 9	419 6
37		James, St., Garlick Hythe . . .	63	127 15 9	496 4	33 2	529 6	718 0	726 0
38	G	John Baptist, St., Walbrook . . .	67	36 15 4	175 11	229 0	404 11	438 16	509 18
39	A	John Evangelist, St.	19	. .	133 18	. .	133 18	153 1	154 4
40	D	John Zachary, St.	41	20 14 0	211 6	0 3	211 9	217 17	220 14
41		Katherine, St., Coleman-street . .	107	26 16 0	851 6	97 3	948 9	779 10	843 1
42		Katherine Cree Church, St., otherwise Christchurch	265	86 1 4	1,207 11	12 13	1,220 4	1,171 19	1,253 7
43	N	Lawrence, St., Jewry	140	1,092 6 6	541 7	6 11	547 18	514 19	526 18
44	W	Lawrence, St., Pountney	48	6 14 0	408 3	0 3	408 6	273 0	301 2
45	H	Leonard, St., Eastcheap	30	. .	240 0	0 3	240 3	205 10	213 18

46	K	Leonard, St., Foster-lane	50	82 0 9	517 2	0 3	517 5	538 19	545 6
47	O	Magnus, St., London Bridge . . .	40	35 16 8	368 1	. .	368 1	343 10	346 13
48		Margaret, St., Lothbury	40	53 6 8	517 12	45 8	563 0	534 12	591 10
49		Margaret, St., Moses	41	. .	239 7	2 4	241 11	191 5	196 12
50	O	Margaret, St., New Fish-street . .	54	32 10 0	407 0	23 10	430 10	433 6	455 0
51	R	Margaret Pattens, St.	28	203 5 6	202 0	42 3	244 3	232 4	236 19
52	FF	Martin Pomroy, St., Ironmonger-lane	37	2 0 0	131 0	. .	131 0	209 18	211 4
53		Martin's, St., Ludgate	125	68 19 4	906 12	9 3	915 15	924 3	956 2
54	V	Martin's, St., Orgars	57	639 8 4	243 18	0 2	244 0	334 13	339 4
55	P	Martin's, St., Vintry	57	67 18 0	605 2	10 11	615 13	497 15	521 15
56		Martin Outwich, St.	40	89 8 9	175 0	9 10	184 10	185 9	196 11
57	N	Mary Magdalen, St., Milk-street . .	63	100 0 0	318 10	3 11	322 1	302 8	310 16
58	W	Mary Abchurch, St.	81	14 17 9	201 9	279 11	481 0	405 9	407 0
59		Mary, St., Aldermanbury	102	154 10 0	623 8	43 2	666 10	726 3	738 2
60	X	Mary, St., Aldermary	82	292 17 0	135 7	10 2	145 9	212 9	218 15
61	Y	Mary-le-Bow, St.	75	. .	403 6	0 7	403 13	465 16	484 0
62	HH	Mary Boshaw, St., Dowgate . . .	42	3 0 0	259 13	0 1	259 14	194 4	212 17
63	Z	Mary Colechurch, St.	47	5 11 6	259 8	. .	259 8	190 0	198 8
64	S	Mary-at-hill, St., Billingsgate . .	103	. .	854 5	. .	854 5	805 6	854 1
65	CC	Mary Magdalen, St., Old Fish-street	93	. .	371 6	4 15	376 1	481 5	511 15
66	DD	Mary Mounshaw, St.	31	. .	213 13	27 14	241 7	172 9	200 6
67	DD	Mary Somerset, St.	43	16 19 0	380 13	1 2	381 15	368 3	404 1
68	AA	Mary Staining, St.	50	. .	199 7	2 16	202 3	154 13	163 10
69	T	Mary Woolchurchaw, St.	31	84 0 0	440 12	. .	440 12	761 0	774 19
70	T	Mary Woolnorth, St.	62	126 15 0	545 0	12 15	557 15	569 18	578 6
71	Q	Matthew, St., Friday-street . . .	30	. .	257 8	. .	257 8	270 3	273 6
72		Michael, Bassishaw, St.	127	962 1 1	509 10	4 10	514 0	593 7	600 11
73		Michael, St., Cornhill	112	949 11 2	987 0	5 3	992 3	959 11	988 16
74		Michael, St., Crooked-lane . . .	62	444 17 0	742 8	0 8	742 10	632 9	656 8
75	BB	Michael, St., Queenhithe	66	.	333 18	19 5	353 3	503 9	508 14
76	II	Michael-le-Quern, St.	39	372 0 0	245 0	. .	245 0	299 16	328 7
77	P	Michael, St., Royal, Paternoster-row.	47	144 18 4	108 0	. .	108 0	134 13	135 6
78	AA	Michael, St., Wood-street	64	500 0 0	297 18	87 10	385 8	421 8	426 2
79	Z	Mildred, St., the Virgin, Poultry . .	57	121 0 0	325 14	76 16	402 10	325 11	348 14

Number of Houses, Amount of Charitable Bequests, Poor's Rate, &c.—continued.

		Names of Parishes and Precincts.	Houses Inhabited. Uninhabited, and Building, 1841.	Annual Value of the Charitable Bequests, besides such as may be vested in the Corporation, Companies, and Royal Hospitals.	Total Amount of Money levied by Assessment for the Poor. 1842.	Received from all other Sources in aid of Poor Rate, 1842.	Total Amount received for the Relief, &c. of the Poor, 1842.	Amount expended in Relief, &c. of the Poor, 1842.	Total Parochial Rates, &c. expended, 1842.
				£. s. d.	£. s.	£. s.	£. s.	£. s.	£. s.
80		Mildred, St., Bread-street . . .	47	350 11 0	59 0	251 18	310 18	242 13	288 4
81	L	Nicholas Acons, St.	39	4 5 4	248 12	. .	248 12	242 2	252 3
82	EE	Nicholas, St., Cole Abbey . . .	37	270 16 4	278 12	. .	278 12	288 6	292 2
83	EE	Nicholas Olave, St.	50	2 0 0	292 3	. .	292 3	307 6	321 18
84		Olave, St., Hart-street.	174	252 9 6	978 14	39 3	1,017 17	775 7	924 18
85	FF	Olave, St., Jewry	41	120 14 9	303 14	. .	303 14	273 2	276 14
86	C	Olave, St., Silver-street	135	12 19 6	611 8	. .	611 8	640 17	654 8
87	Y	Pancras, St., Soper-lane	39	18 3 2	201 9	. .	201 9	218 4	220 16
88		Peter, St., Cornhill	109	202 10 0	1,234 10	0 6	1,234 16	1,125 8	1,194 4
89	I	Peter, St., near Paul's Wharf. . .	54	34 12 0	368 7	0 2	368 9	336 7	366 5
90		Peter-le-Poor, St., Broad-street . .	134	5 4 0	519 5	22 16	542 1	658 5	670 18
91	Q	Peter, St., Westcheap	46	27 13 5	325 10	. .	325 10	296 14	304 7
92		Stephen, St., Coleman-street . . .	521	121 0 0	2,761 19	59 14	2,821 13	2,729 3	3,050 16
93	GG	Stephen, St., Walbrook	62	. .	. .	541 9	541 9	470 13	480 6
94	HH	Swithen, St., London Stone . . .	75	49 1 4	310 13	499 2	809 15	428 1	441 7
95	X	Thomas the Apostle, St.	95	841 1 0	7 1	. .	7 1	482 0	483 18
96	BB	Trinity the Less, or Trinity the Holy	59	5 4 0	522 0	. .	522 0	542 14	544 12
97	II	Vedast, St., *alias* Foster	61	170 18 0	374 3	0 8	374 11	471 8	505 16
		Whitefriars Precinct	135	. .	880 11	12 10	893 1	714 3	789 19
		Total	8,596	18,806 5 1	48,797 7	4,526 16	83,519 15	52,724 15	55,582 14

	East London Union—being the Eastern portion of the City without the Walls, excepting the parish of Trinity-Minories, in the Whitechapel Union.							
98	Botolph, St., Bishopsgate	1,320	2,464 6 0	5,405 5	642 2	6,047 7	5,516 10	6,539 19
99	Botolph, St., Aldgate	1,265	2,923 17 1	3,629 16	1,504 13	5,134 9	3,637 14	4,464 12
100	Botolph, St., Aldersgate, with Glasshouse-yard	795	203 9 4	1,908 19	297 7	2,206 6	2,095 18	2,346 16
101	Giles, St., Cripplegate	1,659	3,992 12 9	5,050 12	425 10	5,476 2	4,856 13	5,704 7
	Total	5,039	9,584 5 2	15,994 12	2,869 12	18,864 4	16,106 15	19,055 14
	West London Union—being the Western portion of the City without the Walls.							
102	Andrew, St., Lower or City Liberty .	599	2,662 10 1	2,723 3	194 13	2,917 16	2,711 9	2,922 11
103	Bartholomew the Great, St. . . .	356	241 8 0	1,436 18	13 9	1,450 7	1,413 1	1,516 18
104	Bartholomew the Less, St. . . .	30	3 17 0	193 13	. .	193 13	208 14	231 8
105	Bride's, St., otherwise St. Bridget, Fleet-street	690	1,440 19 6	. .	. .	. .	3,502 6	3,553 5
	Bridewell Precinct	58	. .	390 16	44 12	435 8	298 14	350 6
106	Dunstan West, St.	374	626 11 6	1,762 6	94 12	1,856 18	1,716 11	1,867 1
107	Sepulchre, St., Newgate	796	2,428 18 11	4,889 15	287 11	5,177 6	5,236 15	5,473 0
	Total	2,903	7,404 5 0	11,396 11	634 17	12,031 8	15,087 10	15,914 9
	Total of the City Unions .	16,538	35,794 15 3	76,188 10	8,031 5	83,519 15	83,919 0	90,552 17

It appeared unnecessary to repeat in this Table the population of each of the City parishes, which has already been stated; but it ought to be noticed that the division into Unions does not accurately obey either the limits of the City or its division by the lines of the ancient walls. Thus the City of London Union comprises, with the ancient City within the Walls, also the Whitefriars Precinct, which makes its total population 55,920; the East London Union includes that portion of St. Botolph without Aldersgate parish which is called Glasshouse-yard, and belongs to the Finsbury division of the Hundred of Ossulstone, while, on the other hand, it omits the parish of Trinity in the Minories, its population being 39,653; and the West London Union, being deprived of the Whitefriars Precinct, contains a population of only 28,571. The total population of the three City Unions is thus seen to be 124,144; and to correct it to the exact population of the City within and without the walls, requires only the subtraction of 1,415 for Glasshouse-yard, and the addition of 579 for Trinity-Minories: the result will be 123,308.

Number of Houses and Inhabitants, annual Value of the Charitable Bequests, and Amount annually expended in the Relief of the Poor in each Parish of the Metropolis without the City; derived from the Census of 1841, *the Returns to the Poor Law Commissioners for the year ended at Lady-day,* 1842, *and the Abstract of the Charity Commissioners' Reports, printed for Parliament in* 1843.

Names of Parishes, Precincts, and Places, arranged in the order of their Union for the support of the Poor, and the Registration of Births, Marriages, and Deaths.	Houses Inhabited, Uninhabited, and Building, 1841.	Inhabitants, 1841.	Annual Value of the Charitable Bequests to the several Parishes.	Amount expended out of the Rates for the Relief, &c., of the Poor, 1842.
			£. s. d.	£. s.
I. West Districts.				
1(*a.*) *Kensington Union:* (Which at first included Chelsea, now separated from it.)				
Fulham	1,530	9,319	678 15 3	3,023 18
Hammersmith	1,695	13,453	683 10 10	4,460 10
Kensington, St. Mary Abbotts	2,637	26,834	576 11 0	7,595 10
Paddington	4,090	25,173	171 18 0	3,713 12
Total	9,952	74,779	2,110 15 1	18,793 10
1(*b.*) *Chelsea Parish:* (Acting separately under the Poor Law Commissioners.)				
St. Luke Chelsea	5,936	40,179	78 0 10	13,976 18
2. *St. George Hanover-square Parish:* (Not in union; having a local Act for the poor.)				
St. George's	8,154	66,453	311 3 0	16,100 4
3. *Westminster, City:* (Not in union; having a local Act for the poor.)				
St. Margaret	3,467	30,258	8,654 17 8	9,106 18
St. John the Evangelist	3,197	26,223	12 0 0	
Close of the Collegiate Church of St. Peter	35	231	..	..
Total	6,699	56,712	8,666 17 8	..
4. *St. Martin-in-the-Fields Parish:* (Acting separately under the Poor Law Commissioners.)				
St. Martin-in-the-Fields	2,512	25,190	2,314 19 8	11,321 0
5 *St. James's Parish:* (Not in union; having a local Act for the poor.)				
St. James	3,713	37,398	1,987 10 10	10,567 4
Total of West Districts	36,966	300,711	15,469 7 1	79,865 14

Number of Houses and Inhabitants, &c. —continued.

Names of Parishes, Precincts, and Places, arranged in the order of their Union for the support of the Poor, and the Registration of Births, Marriages, and Deaths.	Houses Inhabited, Uninhabited, and Building, 1841.	Inhabitants, 1841.	Annual Value of the Charitable Bequests to the several Parishes.	Amount expended out of the Rates for the Relief, &c., of the Poor, 1842.
			£. s. d.	£ s.
II. North Districts.				
6. *St. Marylebone Parish:* (Not in union; having a local Act for the poor.)				
St. Marylebone	14,945	138,164	2 10 0	41,476 8
7. *St. Pancras Parish:* (Not in union; having a local Act for the poor.)				
St. Pancras	15,474	129,763	152 7 0	28,514 16
8. *Islington Parish:* (Not in union; having a local Act for the poor.)				
St. Mary Islington	9,115	55,690	962 11 11	8,692 10
9. *Hackney Union:*				
St. John Hackney	2,103	37,771	2,950 17 8	11,796 0
St. Mary Stoke Newington . .	737	4,490	93 16 8	1,344 8
Total	2,840	42,261	3,044 14 4	13,140 8
Total of North Districts . .	42,374	365,878	4,162 3 3	91,824 2
III. Central Districts.				
10. *St. Giles-in-the-Fields and St. George Bloomsbury Parishes:* (Having jointly a local Act for the poor.)				
St. Giles's-in-the-Fields . . .	2,986	37,311	828 8 1	14,582 10
St. George Bloomsbury . . .	2,188	16,981		
Total	5,174	54,292	..	..
11. *Strand Union:*				
St. Anne Soho	1,446	16,480	53 0 0	4,698 18
St. Clement Danes	1,490	15,459	4,853 0 0	6,716 5
St. Mary-le-Strand	241	2,520	105 0 0	8,884 8
St. Paul Covent-garden . . .	599	5,718	266 0 0	2,160 11
Precinct of the Savoy	64	414	..	118 14
Liberty of the Rolls	378	2,565	..	989 9
Barnard's, Clement's, Clifford's Thavie's, Serjeant's and New Inns, with the Inner and Middle Temple	1,000	1,023	..	..
Total	5,218	44,179	5,277 0 0	23,568 5
12. *Holborn Union:*				
St. Andrew Without, or above the Bars, and St. George the Martyr	2,305 773	21,438 7,897	242 10 0	6,756 11
Carried forward . .	3,078	29,335	242 10 0	6,756 11

Number of Houses and Inhabitants, &c.—continued.

Names of Parishes, Precincts, and Places, arranged in the order of their Union for the support of the Poor, and the Registration of Births, Marriages, and Deaths.	Houses Inhabited, Uninhabited, and Building, 1841.	Inhabitants, 1841.	Annual Value of the Charitable Bequests to the several Parishes.	Amount expended out of the Rates for the Relief, &c., of the Poor, 1842.
III. Central District—*continued.*			£. s. d.	£. s.
Brought forward . . .	3,078	29,335	242 10 0	6,756 11
Saffron-hill, Hatton-garden, Ely-rents, and Ely-place	967	9,455	..	2,224 1
Furnival's, Gray's, Lincoln's and Staple's Inns	374	677	.	..
Charter House	1	185	..	..
Total	4,419	39,652	242 10 0	8,980 12
13. *Clerkenwell Parishes:* (Not in union; having jointly a local Act for the poor.) St. James and St. John Clerkenwell	7,242	56,756	659 16 2	13,225 4
14. *St. Luke Middlesex Parish:* (Not in union; having a local Act for the poor.) St. Luke Middlesex	6,385	49,829	1,676 3 8	15,204 13
15. *East London Union,* (as already given)	5,039	39,653	..	15,994 12
16. *West London Union,* (as already given)	2,903	28,571	..	11,396 11
17. *City of London Union,* (as already given)	9,575	55,920	..	49,797 7
18. *St. Sepulchre Middlesex Parish:* (Not in union; having a local Act for the poor.) St. Sepulchre, without Newgate, and without the City . . .	563	4,801	..	1,552 12
Total of Central Districts .	46,518	373,653	8,683 17 11	154,302 12
IV. East Districts.				
19. *Shoreditch Parish:* (Not in union; having a local Act for the poor.) St. Leonard Shoreditch . . .	13,297	83,432	4,489 7 6	20,430 5
20. *Bethnal Green:* (Acting separately under the Poor Law Commissioners.) St. Matthew Bethnal-green . .	..	74,088	650 7 6	14,019 8
21. *Whitechapel Union:* St. Botolph without Aldgate, or East Smithfield	487	3,627	..	2,243 7
Christchurch Spitalfields . . .	2,451	20,436	323 14 8	4,978 7
Carried forward . .	2,938	24,063	323 14 8	7,221 14

Number of Houses and Inhabitants, &c.—continued.

Names of Parishes, Precincts, and Places, arranged in the order of their Union for the support of the Poor, and the Registration of Births, Marriages, and Deaths.	Houses Inhabited, Uninhabited, and Building, 1841.	Inhabitants, 1841.	Annual Value of the Charitable Bequests to the several Parishes.	Amount expended out of the Rates for the Relief, &c., of the Poor, 1842.
			£. s. d.	£. s.
IV. East Districts—*continued.*				
21. *Whitechapel Union*—continued.				
Brought forward . .	2,938	24,063	323 14 8	7,221 14
Holy Trinity, Minories . . .	68	579	9 7 3	312 13
St. Katharine by the Tower Precinct	22	96	184 16 0	694 15
Mile End New Town Hamlet .	1,114	8,325	92 19 2	1,476 3
Norton Folgate Liberty . . .	232	1,674	195 8 0	463 14
Old Artillery-ground	198	1,558	..	382 12
St. Peter ad Vincula, in the Tower	74	1,107	..	40 0
Tower Liberty without . . .	43	310	..	
Whitechapel, St. Mary . . .	4,684	34,053	1,129 15 11	8,790 19
Total	9,373	71,765	1,936 1 0	19,382 10
22. *St. George's-in-the-East Parish:* (Acting separately under the Poor Law Commissioners.)				
St. George's-in-the-East . . .	6,252	41,350	837 14 6	14,244 0
23. *Stepney Union:*				
St. Dunstan Stepney (in part)* .	..	..	312 0 8	..
Limehouse, St. Anne	2,967	19,337	364 15 2	4,028 18
Mile End Old Town	7,985	45,308	353 9 8	8,251 11
Ratcliff	1,727	11,874	111 16 8	3,407 13
Shadwell, St. Paul	1,635	10,060	386 18 0	3,226 16
Wapping, St. John	506	4,108	634 2 6	1,995 17
Total	14,820	90,687	2,163 2 8	20,910 15
24. *Poplar Union:*				
Bow, or Stratford-le-Bow . . .	890	4,626	400 5 10	1,500 5
Bromley, St. Leonard	211	6,154	145 18 0	1,948 17
Poplar, All Saints	3,267	20,342	365 15 0	636 3
Total	4,368	31,122	911 18 10	11,085 5
Total of East Districts . .	48,110	392,444	10,988 12 0	100,293 17
V. South Districts.				
25. *St. Saviour's Union:*				
Christchurch	286	14,616	2,431 11 2	4,133 5
St. Saviour's	2,861	18,219	2,772 2 9	8,321 14
Total	3,147	32,835	5,203 13 11	12,454 19
26. *St. Olave's Union:*				
St. John Horsleydown . . .	1,578	10,115	2,977 10 8	3,199 6
St. Olave	953	6,745		3,178 3
St. Thomas	95	1,759	162 0 0	348 19
Total	2,626	18,619	3,139 10 8	6,726 8

* The ancient parish of St. Dunstan Stepney now comprises only the hamlets of Mile End Old and New Towns, and Ratcliff, but formerly embraced also the present parishes of Poplar, Limehouse, Wapping, Bethnal Green, and Spitalfields, which are entitled to share in the general charities of St. Dunstan.

Number of Houses and Inhabitants, &c.—continued.

Names of Parishes, Precincts, and Places, arranged in the order of their Union for the support of the Poor, and the Registration of Births, Marriages, and Deaths.	Houses Inhabited, Uninhabited, and Building, 1841.	Inhabitants, 1841.	Annual Value of the Charitable Bequests to the several Parishes.	Amount expended out of the Rates for the Relief, &c., of the Poor, 1842.
			£. s. d.	£. s.
V. South Districts—*continued.*				
27. *Bermondsey Parish:* (Acting separately under the Poor Law Commissioners.) Bermondsey	970	34,947	489 16 0	14,142 10
28. *St. George Southwark Parish:* (Acting separately under the Poor Law Commissioners.) St. George the Martyr	7,058	46,644	1,371 18 0	12,342 16
29. *Newington Parish:* (Not in union; having a local Act for the poor.) St. Mary Newington Butts . .	9,370	54,606	693 0 10	15,627 17
30. *Lambeth Parish:* (Acting separately under the Poor Law Commissioners.) St. Mary Lambeth	18,686	115,888	1,430 5 4	32,015 2
31. *Camberwell Parish:* (Acting separately under the Poor Law Commissioners.) St. Giles Camberwell	2,442	39,868	502 19 8	6,732 18
32. *Rotherhithe:* (Acting separately under the Poor Law Commissioners.) Rotherhithe	2,548	13,917	334 19 9	7,294 10
33. *Greenwich Union:*				
Deptford, St. Nicholas . . .	1,226	6,991	888 1 8	3,354 6
Deptford, St. Paul	3,054	18,626		7,382 11
Greenwich	4,750	29,755	4,469 2 10	8,894 19
Woolwich	3,157	25,785	267 14 6	8,956 8
Total	12,187	81,157	5,624 19 0	28,588 4
Total of South Districts . .	59,034	438,481	18,791 3 2	135,925 4
VI. Suburban Districts. (Not comprised in the Registrar-General's Bills of Mortality, though within the jurisdiction of the Metropolitan Police Courts.)				
34. *Hampstead Parish:* (Included in the Edmonton Union.) St. John Hampstead	1,489	10,093	401 6 0	2,763 18

Number of Houses and Inhabitants, &c.—continued.

Names of Parishes, Precincts, and Places arranged in the order of their Union for the support of the Poor, and the Registration of Birth, Marriages, and Deaths.	Houses Inhabited, Uninhabited, and Building, 1841.	Inhabitants, 1841.	Annual Value of the Charitable Bequests to the several Parishes.	Amount expended out of the Rates for the Relief, &c., of the Poor, 1842.
			£. s. d.	£. s.
VI. Suburban Districts—*continued.*				
35. *Acton and Chiswick Parishes:* (Included in the Brentford Union.)				
Acton	501	2,665	137 6 4	926 1
Chiswick	1,130	5,811	67 5 7	1,952 17
Total	1,631	8,476	204 11 11	2,878 18
36. *Wandsworth and Clapham Union:*				
Battersea	1,154	6,617	253 0 8	2,116 8
Clapham	2,109	12,106	56 10 0	3,531 2
Putney	736	4,684	452 19 1	1,798 18
Streatham	949	5,994	191 9 10	1,452 13
Tooting	356	2,840	39 5 0	705 2
Wandsworth	1,400	7,614	488 11 7	3,954 8
Total	6,704	39,855	1,481 16 2	13,558 11
37. *Barnes Parish:* (Included in the Richmond Union.)				
Barnes	290	1,461	43 7 2	463 7
38. *Wimbledon Parish:* (Including in the Kingston Union.)				
Wimbledon	452	2,630	48 12 6	1,243 3
39. *Merton Parish:* (Included in the Croydon Union.)				
Merton	340	1,914	133 6 6	757 5
40. *Penge Hamlet:* (An outlying portion of Battersea Parish, on the confines of Kent, and included in the Croydon Union.)				
Penge	99	270	..	..
41. *Lewisham Union:*				
Charlton	455	2,655	79 19 0	506 10
Eltham	413	2,186	558 19 0	790 11
Kidbrooke (Liberty)	77	597	..	27 10
Lee	456	2,360	133 1 3	306 0
Lewisham	1,713	12,276	397 15 0	2,459 13
Mottingham (Hamlet)	20	124	..	29 18
Plumstead	530	2,816	103 1 4	887 7
Total	3,664	23,014	1,272 6 7	5,007 9
Total of Suburban Districts.	14,669	87,713	3,585 6 10	26,672 11
Metropolitan Police on Duty	..	2,930	..	..
Total of the Metropolis	247,671	1,961,810	61,680 10 3	588,884 0

METROPOLIS.

*Population to a Square Mile; Square Yards to each Person; Square Yards and Persons to each House; annual Value of rated Property to each House and Person; and annual Amount of Poor Rate to each Person.**

DISTRICTS.	Population to a Square Mile.	Square Yards to each Person.	Square Yards to each House.	Persons to each House.	Mean Annual Value of Rated Property on each House.	Mean Annual Value of Rated Property to each Person.	Annual Amount of Poor Rate to each Person.
					£.	£.	£.
Kensington, Chelsea . .	8,515	363·8	2,517·6	6·9	29·1	4·21	·285
St. George Hanover-square	39,018	79·4	691·5	8·7	79·2	9·09	·242
Westminster	43,209	71·7	634·8	8·8	32·4	3·66	·161
St. Martin-in-the-Fields .	62,006	50·0	515·7	10·3	109·8	9·86	·449
St. James Westminster .	145,059	21·4	222·4	10·3	69·0	6·69	·283
Marylebone	59,346	52·2	509·0	9·8	57·5	5·90	·300
Pancras	31,942	97·0	852·2	8·8	33·1	3·76	·220
Islington	11,686	265·1	1,785·1	6·6	24·9	3·81	·156
Hackney	6,847	452·4	2,658·2	5·9	22·4	3·81	·311
St. Giles	138,988	22·3	244·0	11·0	47·8	4·37	·269
Strand	169,453	18·3	195·7	10·1	48·8	4·82	·355
Holborn	155,160	20·0	199·8	9·7	29·7	3·04	·226
Clerkenwell	113,512	27·3	222·8	8·2	25·4	3·11	·233
St. Luke	132,880	23·3	181·9	7·8	27·9	3·58	·305
East London, West London	195,846	15·8	134·3	8·8	25·3	2·88	·426
City of London . . .	94,488	32·8	229·9	7·1	77·5	10·98	·940
Shoreditch	86,123	36·0	237·4	6·6	13·4	2·03	·245
Bethnal-green	62,390	49·7	312·2	6·3	8·1	1·29	·189
Whitechapel	127,313	24·3	198·0	8·1	22·4	2·75	·270
St. George-in-the-East .	115,061	26·9	186·0	6·9	23·6	3·42	·344
Stepney	30,336	102·1	657·2	6·3	14 8	2·34	·231
Poplar	5,519	561·2	3,133·1	6·1	31·7	5·16	·356
St. Saviour, St. Olave . .	106,411	29·1	206·1	7·2	27·1	3·79	·372
Bermondsey	36,074	85·9	523·9	6·2	13·5	2·20	·405
St. George Southwark .	†	†	† 1	7·	15·4	2·21	·265
Newington	55,473	55·8	325·4	5·8	14·1	2·42	·286
Lambeth	20,376	152·0	990·3	6·5	21·5	3·30	·276
Camberwell	5,583	554·8	3,232·3	5·8	12·3	2·11	·169
Rotherhithe	12,908	240·0	1,380·0	5·8	19·9	3·47	·524
Greenwich	11,343	273·1	1,844·0	6·8	15·8	2·35	·353
Hampstead (Parish) . .	3,120	992·6	7,100·5	7·2	33·7	4·71	·551
Acton and Chiswick (Parishes)	1,605	1929·8	10,833·9	5·6	17·0	3·03	·397
Wandsworth and Clapham (Union)	4,367	709·3	4,211·9	5·9	23·8	4·01	·613
Barnes (Parish) . . .	1,140	2716·5	16,675·6	6·1	31·0	5·04	·464
Wimbledon (Parish) . .	455	6809·1	28,201·6	4·1	23·1	5·57	1·061
Merton (Parish) . . .	817	3793·1	22,476·8	5·9	19·8	3·35	·464
Penge (Hamlet) . . .	206	15057·8	76,709·4	5·1	31·7	6·80	·733
Lewisham (Union) . .	1,505	2058·1	11,923·0	5·8	21·3	4·19	·324

* This table is an extension of one published in the last Annual Report of the Registrar General.

† With St. Saviour and St. Olave.

The preceding data are sufficient to afford us some approximation to the total amount raised in the metropolis, in 1842, by direct taxation upon its 1,961,810 inhabitants, and 8,082,369*l.* of assessed rental; and for the purposes of such an estimate, we may disregard the different periods of the year at which the accounts are made out for the Police, and for the Poor Law and County Rate Returns, as we have already disregarded them in compiling the preceding tables, with a view to comparisons which are not vitiated by this slight discrepancy. We find 111,938*l.* 13*s.* raised under the name of County Rates; 207,202*l.* 15*s.* 3½*d.* under that of Police Rates, exclusive of the 68,161*l.* 15*s.* 4*d.* paid to the same account by the Treasury; and 588,884*l.* applied in the relief of the poor in various forms; making a total of 908,025*l.* 8*s.* 3½*d.* paid by the several parishes and places, to meet which the total amount levied under the name of Poor's Rates was 877,666*l.* 18*s.* Add to this sum, about 100,000*l.* for Sewers' Rates; 400,000*l.* for paving, lighting, and cleansing the streets; and 340,000*l.* for a supply of water, and we have a total of 1,748,025*l.* 8*s.* levied by direct taxation. This is exclusive of church rates and dues, and the payments under the name of tithes in the city; and without any reference to the enormous charge upon the metropolis for the supply of gas to private houses and establishments. The latter may assume the name of a competitive speculation; but it is, in reality, a municipal service, and must ever, on its present system, involve both protection and monopoly.

The indirect taxation of the metropolis is alone a subject sufficiently extensive for separate inquiry. It consists of fees in the courts of civil and criminal justice, and to officers of the prisons and police; fees on licenses to ply for hire, &c.; port, navigation, and metage dues; tolls of the markets, streets, and bridges; fees to surveyors under the building act; the contributions to maintain a fire police, made by the several insurance companies; fees for the use of cemeteries, &c. Reserving a notice of this indirect taxation for a future opportunity, I have now, in obedience to the desire expressed at a former meeting, to describe more fully the system of taxation and expenditure adopted for the sewerage of the metropolis.

History and Statistics of the Present System of Sewerage in the Metropolis. By Joseph Fletcher, Esq., Barrister-at-Law, Honorary Secretary.

[*Read before the Statistical Society of London,* 18*th March,* 1844.]

Having been requested, at the last meeting of this Society, to enter into more detail on the subject of the sewerage of the metropolis than was within the scope of the paper which I had then the honour of reading to the fellows assembled, I have, in the following pages, collected together the facts which supply a rapid outline of the history and present state of the Commissions, to which this portion of the public works of the metropolis is entrusted; and it must be owned that it is not a little humiliating to find that what is now deemed essentially requisite for town life in regard to drainage, has never once been contemplated by the general laws passed for the execution of such works. In fact, the legal purposes and powers of the existing Commissions of Sewers, except where a very partial aid is derived from local acts, are limited to the surface drainage of a marsh; and the metropolis is at the present

moment, in the eye of the law, under the ancient and approved drainage laws of the Marsh of Romney in Kent; the first reclaimed of all the great maritime levels in England.

By the prescriptive constitution of this district, the drainage of the marsh, and the support of the sea-walls, was entrusted to a body of 24 jurats, appointed by as many townships or manors, and a bailiff, appointed by the same, who appears to have been, like the Saxon reeves generally, at once the presiding and the executive officer. This body parcelled out, among the several proprietors, the works to be maintained; and in cases of neglect, the repairs were made by the bailiff, and charged by the jurats upon the party specially liable; the method of proceeding by common assessment not being established until the thirteenth century. The customary laws under which this body existed and acted were revised and confirmed in the 41st of Henry III., by the Justice Henry de Bathe, who was dispatched into the marsh for the redress of past grievances, and the drawing up rules for the future. Edward I., in the sixteenth year of his reign, issued a special commission to John de Lovetot, and Henry de Apuldrefeld, to view the banks and ditches upon the sea coast and parts adjacent within the county of Kent, in divers places then broken, through the violence of the sea, and to inquire by whose default this damage had happened; and together with the bailiffs of liberties, and others in those parts, to distrain all those which held any lands and tenements there, and had or might have defence and preservation in any sort, by the said banks and ditches, according to the quantity of the said lands and tenements, either by the number of acres, or by carucates, for the necessary repairs of those banks and ditches, as often as there should be need. The Commissioners, with the jurats, and others of the marsh, confirmed the ordinances of Henry de Bathe, and improved them by incorporating into the government of the marsh the method of general assessment; assigning the election of the bailiff, called the king's bailiff, to the lords of the marsh. And Henry de Apuldrefeld and Bertram de Tancrey, similarly appointed in the eighteenth year of his reign, extended the marsh laws, with the like common assent, to every hundred and township in Kent, as well by the sea coast as bordering on the Thames and other waters, in which the marsh lands are subject to inundation; twelve or six lawful men being to this end chosen in each, according to the largeness of the hundreds or towns.

Other commissions were on various occasions issued by the Crown during this and the succeeding reigns, for the preservation of the walls and ditches of Romney Marsh; the regulations for their maintenance were further improved; and these laws and regulations at length became so famous, that King Henry VI., in the sixth year of his reign, by the advice and assent of the Lords spiritual and temporal, and at the special instance of the Commons of the realm, then assembled in his Parliament, holden at Westminster, having considered the great damage and losses which had often happened by the excessive rising of waters in divers parts of the realm, and that much greater was like to ensue, if remedy were not hastily provided, ordained by statute of 6 Henry VI., c. 5, that for 10 years then next ensuing, several commissions of sewers should be made to divers persons by the Chancellor of England, for the time to come, in all parts of this his realm, where it should be needful (the form of which commission is recited in the statute), and amongst other things, gave unto the said commissioners special power and direction "to

make and ordain necessary and convenable statutes and ordinances, for the salvation and conservation of the sea-banks and marshes, and the parts adjoining, according to the laws and customs of Romney Marsh.'

Commissions of sewers had been issued on special occasions of difficulty, during the preceding reigns, for other marsh districts than that of Romney; and this statute added greatly to the powers of such commissioners; for it authorized them to make officers, take accounts of their expenditors, set labourers on work, and rate their wages. A supplemental statute of the 8th of Henry VI., c. 3, supplied some defects in the former, as also did one of the 12th of Edward IV., c. 7, for taking away weares and fishgarths; and those of the 18th of Henry VI., c. 10; 23rd Henry VI., c. 9; 12th Edward IV., c. 6; 4th Henry VII., c. 1; and 6th Henry VIII., c. 10, successively continued its powers until the passing of the 23rd Henry VIII., c. 5, which is the existing statute of sewers, and chiefly governs the metropolitan as it does all the other commissions.

It provides that "Commissions of Sewers and other the Premises shall be directed in all parts within this realm, from time to time, where and when need shall require," according to the manner and form precribed "to such substantial and indifferent persons as shall be named by the Lord Chancellor and Lord Treasurer of England, and the two Chief Justices for the time being,* or by three of them, whereof the Lord Chancellor to be one." Any six commissioners, of whom three must be of the quorum, may act as the king's justices to survey the walls, ditches, banks, gutters, sewers, gates, calcies, bridges, streams, and other defences lying within the limits assigned; and also all fishgarths, mill-dams, locks, hebbing-weares, keeps, flood-gates, and other like annoyances, and the same cause to be made, corrected, repaired, amended, put down or reformed, as case shall require, after their wisdoms and discretions, as well according to the statutes and ordinances already made, as by the authority of the present ordinances; after ascertaining by a jury the persons equitably liable to the charge of such works, and the proportions in which they ought to be assessed.

By the terms of the Commission recited in this statute, the Commissioners are empowered to appoint keepers, bailiffs, surveyors, collectors, expenditors, and other ministers and officers, who shall account to them; to impress workmen, and take materials, carriages, &c.; to make statutes and ordinances for the safeguard, conservation, redress, correction, and reformation of the premises, *after the laws and customs of Rumney Marsh, in the county of Kent, or otherwise;* to determine suits and complaints brought before them; to make and direct writs, precepts, warrants, and other commandments to sheriffs, bailiffs, and all other ministers, officers, and persons, as well within liberties as without, and compel the return of the same; and to compel by distress, fines, and amerciaments, or by other punishments, ways, or means, all such as shall be negligent, gainsaying, or rebelling in the said works, reparations, or reformations of the premises, or negligent in the due execution of this Commission; saving the king the fines and amerciaments due to the crown; but requiring all sheriffs, bailiffs, and

* At present, the Lord Chancellor and the two Chief Justices.

other officers to return juries at the desire of the Commissioners and to attend upon them. The Commissioners must take a prescribed oath to the faithful and upright discharge of the duties devolved upon them; and may sell lands in discharge of arrears of rates, if they enrol their decree or ordinance to that effect, on parchment, and certify the same into the Court of Chancery, for the royal assent thereto.

Every Commissioner must possess estate in fee simple, fee tail, or for life, to the value of 40 marks per annum; or be resident and free in a city, borough, or town corporate, and possessed of moveable substance to the clear value of 100*l.*; or be an utter barrister; and in any case be duly sworn, or forfeit 40*l.* for every attempt to sit by virtue of any Commission of Sewers, without taking the required oath. A general avowry is allowed in case of actions against officers for taking any distress; and treble damages are given to them, if the verdict be for the defendant. The Commissioners are allowed 4*s.* out of their public funds, for every day in which they "take pain" in the execution of the Commission of Sewers, and are to determine the salaries of their officers and servants. By the 25th Henry VIII., c. 10., none can be put in commission who are not resident in the county wherein it is to be executed; and a penalty of 5 marks is imposed on any Commissioner refusing to take the prescribed oath.

The 3rd and 4th of Edward VI., c. 8, makes this statute perpetual; subjects the Crown lands to its full operation, in accordance with provisions to the like effect in the original statute; and extends the duration of the several commissions from three to five years; a term further extended by the 13th Eliz., c. 9, to 10 years, unless they be repealed by other commissions, or rendered obsolete by supersedeas. All the walls, ditches, banks, gutters, sewers, gates, causeys, bridges, and the streams and water-courses, which have their passage into the river Thames, within two miles of the City of London, were brought under the statute of sewers by the 3rd of James I., c. 14; and the several metropolitan commissions derive various powers from the local Act of the 2nd of William and Mary, s. 2, c. 8, "For paving and cleansing the streets in the Cities of London and Westminster, and suburbs and liberties thereof, and out-parishes in the County of Middlesex, and in the Borough of Southwark, and other places within the weekly bills of mortality, in the County of Surrey." Lastly, the 7th of Anne, c. 9, gave to the Committee of Common Council for sewers and paving in the City of London the same powers as the Commissioners of sewers for counties; at the same time that the 9th of Anne, c. 10, extended the powers of all such Commissioners in the sale of lands for arrears to copyholds, which had escaped the terms of former statutes.

Under the statute of sewers, the metropolis, and the adjacent districts, comprehended within a circle of 10 miles from the post-office, are divided into six trusts, besides that of the City and Liberties; each possessing a separate and independent jurisdiction within its own limits. These trusts are: the Commission of Sewers for the City and Liberties of Westminster and part of the County of Middlesex, the operations of which are aided by several local Acts, of which the principal is that of the 47th of George III.; the Commission of Sewers for Holborn and Finsbury, and part of the County of Middlesex, having local Acts of the 18th and 54th of George III.; the Commission of

Sewers for the Tower Hamlets, which has no local Act; the Blackwall, or Poplar and Stebunheath Marsh Commission of Sewers, likewise without any local Act; the Commission of Sewers from the river Ravensbourne, in Kent, to the Ember branch of the river Mole, in Surrey, which has three local Acts, of the 49th, 50th, and 53rd of George III.; and the Commission of Sewers for Regent-street, under a local Act of the 43rd of George III. Those of the Tower Hamlets and Blackwall are, in fact, the only commissions unaided by local statutes.

The commissions issued by the Crown, under the 23rd of Henry VIII., c. 5, however, elect a very different administrative body from that of Romney Marsh. Under the latter, the whole of the extensive powers for draining and embanking are vested in the body locally elected, who have been subjected only to a sort of visitorial authority on the part of the Crown. But the modern commissions of sewers, framed at a time when the prerogative was at its highest stretch of power, vests nearly the whole of these powers in the nominees of the Crown; no longer merely presiding officers, but a whole local council; the inhabitants of the district being called upon merely to exercise the subsidiary functions of jurymen, if called upon by the sheriff so to do, when the Commissioners want a jury. Not only are the greatest powers possessed by the Commissioners, therefore, those designed merely for the drainage and embanking of fens; but they are without the constitutional advantage, except in the City, of that local election by which the jurats of Romney Marsh are still placed in office.

Upwards of two centuries ago, the learned Mr. Robert Callis, whose readings upon the statute of sewers are still the principal authority in this branch of local law, pointed out the great evils arising from this want of responsibility to public opinion in the appointment of the Commissioners. "Because that persons of profound wisdoms, deep experience, tried learning, generous disposition, and good estate, should be put into these commissions of sewers, the statute did make choice of four honourable persons to have and take the nominations of such as should, for their integrity, learning, wealth, wisdom, and experience, be worthy to be put into this Commission. But as these great persons of honour, by their high places, are most commonly busied in matters of great importance, they many times refer these matters to others, by means whereof divers persons have of late years crept into Commission, which this statute doth not allow of, which do not only want knowledge and experience, but which are also transported and carried away with self-will, and serve most commonly to make a faction of the greater number to carry away businesses, when the graver and wiser sort are forced (being overladen with popular voices) to give way to run into contrary courses, and are made to surcease from making good and wholesome laws and ordinances, and sometimes are, as it were, forced to agree to those which are worse."*

In what terms the learned commentator would have expressed himself concerning the present system of self-election, under which these great persons of honour refer the appointment of Commissioners to the Commissioners themselves, it is not difficult to divine. The actual system is, on the termination of a Commission, for the existing Commissioners

* Callis, edit. 1824, p. 268–9.

to nominate their successors; among whom are included commonly the principal proprietors in the district, of whom it is well known that very few will even take the oaths; others, who, though well qualified, will seldom attend; others who will attend for the dignity, honour, and dinner, and to make up a board; and, finally, a small knot of working men, usually of inferior station and fortune, who are the real trustees of the extraordinary powers and revenues of these anomalous bodies. It is the latter who form an express executive committee in some Commissions, and virtually do so, by their constant attendance and sole knowledge of the business in the rest; and allowing to these gentlemen at least the average of human virtue, it is not surprising that many should doubt the propriety of entrusting an almost despotic power to such coteries of virtually self-appointed persons.

They are not only an administrative body for maintaining and improving the drainage, by such means as they may think proper, and levying any amount of money which they may please, to defray the cost of doing so; but they form a court of record, though not in *aliquo certo loco*, with power to amerce, fine, and imprison even the sheriff himself, if, upon writ or warrant directed to him, he does not return a jury, or make attendance, as the case may be; and to make laws, ordinances, and decrees, binding upon every one, under pain of being visited by the same unlimited power. It was for a long time debated whether they had authority to make new banks, drains, &c., or only maintain the old ones; but Callis's opinion is decidedly in favour of the larger authority, and has commonly been followed. The Commissioners may order works on their personal view and survey, with such evidence in aid as they may think proper; but it is generally the business of a jury, summoned by the sheriff, on the warrant of the Commissioners, to present impediments and nuisances; what works want executing; the persons who are bound to perform them, or are liable to the general charge of their execution; those who for any cause, or by any custom, are exempt from such charges; as also the misconduct of officers, and contempts and neglects of the decrees and orders of the court. But the labours of the juries, who, when assembled, are necessarily under the guidance of the surveyor of each trust, are little more than a form of perambulation, terminating each day with a tavern dinner, which the Commissioners pay for, as for their own, out of the rates. It is obvious, also, that the surveyor is a person upon whom the Commissioners will commonly be as much dependent, in details, as the juries themselves; and yet this officer, so far as the public is concerned, is thus screened from responsibility in every direction.

Mere frontage involves a *prima facie* liability to the repair of banks; and liability to various works may arise from covenant, prescription, custom or tenure; but the common ground of assessment to sewer's rate, and the universal ground in London, is the *usus rei*, to all who derive a benefit or avoid a damage through the works under the Commissioners. Rates on this ground are sometimes appointed by presentment of a jury, and sometimes by the Commissioners without the intervention of a jury; and must be resorted to wherever the special liabilities are not sufficient to meet the charge of the works required. The sewers' rates are considered a landlord's tax; but they are necessarily levied on the occupier, who may show his want of the whole interest, and the

Commissioners would distribute the burthen accordingly; but, practically, the adjustment is left to be made between the parties individually; and, generally speaking, they are a tax left to be defrayed by the tenant, who, on newly coming into his premises is liable for any amount of arrears.

The great vale of the lower Thames, from Maidenhead to the sea, is enclosed by ranges of chalk hills, which form the North Downs of Surrey and Kent on the south, and the Chiltern Forest and succeeding hills, in Bucks and Herts, on the north. Inclining gradually towards the Thames, the chalk strata form a great basin of very irregular circuit and surface, which is occupied by the various deposits of clay and gravel, known to geologists under the name of the London Clay Formation. The gentle elevations rising from the northern bank of the Thames, on which the cities of London and Westminster are chiefly built, are composed of a sound dry gravel, as also is the subsoil of the lower lands bordering upon the river, even on the southern side, to Lambeth and Camberwell. But to these gravels, both on the north and south, succeed beds of deep and cold clay, over which the town is rapidly extending itself, as its suburbs successively climb towards the heights of Hampstead and Highgate, at a distance of four miles from the river on one side, and those of Norwood, at a distance of seven miles from it on the other; both of which ranges consist of beds of ferruginous and sterile sand, clay, and gravel.

It is difficult to carry back the imagination to the period when the City of London occupied only one or two of the little hills rising above the first deep water of the Thames, and yet unless we do this, it will be almost impossible to understand the primitive state in which its public works remained to a comparatively recent period, and the rude principles which yet govern them in various respects, more particularly in regard to drainage. Some idea of the state from which the sewerage has gradually brought the town, may be formed from the following memoranda as to its hydrographical state, when the brooks which flowed through and about the city were required to supply the inhabitants with water no less than to cleanse their streets:*—

"The River of Wells, so called from its being formed by the united streams from several wells in the neighbourhood of the Charter House and Smithfield, flowed to Holborn Bridge. The Old-bourne, or Hill-bourne, so called from its running down a hill, rose near Holborn Bars, and running east, joined the River of Wells at Holborn Bridge; from thence the united streams flowed between the Fleet and Bridewell into the Thames near Blackfriars Bridge. In 1307, at a Parliament held at Carlisle, the 35th of Edward I., Henry Lacy, Earl of Lincoln, complained that whereas formerly the watercourse under the Fleet and Holborn Bridges was sufficiently deep and wide to allow ten or twelve ships at once, loaded with merchandize, to come up to Holborn Bridge, but that in 1199, in the first year of his reign, King John had granted to the Knights Templars ground to erect a mill upon, at Castle Baynard, and the whole of the water in this watercourse (which was afterwards called Turn Mill Brook) to work it; owing to which diversion chiefly, and also

* Derived from a paper by Thos. Wicksteed, Esq., read before the Society of Arts, May 24th, 1835.

to the filth of the Tanners choking it up, and divers other impediments, vessels could not now enter as they were wont; he therefore prayed that the mayor and sheriffs of London might be directed to view the water-course to substantiate his statements. It was in consequence cleansed, but was never again of the depth or breadth that it had formerly been. In 1502, the 17th of Henry VII., the whole course of Fleet Dyke, then so called, was effectually cleansed so as to allow boats with fish and fuel to navigate as far as Holborn Bridge.

"In 1589, in the 31st of Elizabeth's reign, the Common Council of the city granted a fifteenth for the cleansing of this brook, or dyke, and for this purpose the springs on Hampstead Heath were collected into one head, and conveyed by means of a channel to Fleet Ditch, to scour it out; but after spending a large sum of money, the work proved a failure, and the banks falling in, the ditch was choked up more than ever.

"In 1668, in Charles the Second's reign, after the Fire of London, it was again cleansed, and a handsome canal was made with brick walls and wharfs on each side as far as Holborn Bridge, 2100 feet long, 40 feet wide, and 5 feet deep at a middling tide; but the expense of making this canal, with its wharfs, &c., (amounting to nearly 28,000*l.*,) and the annual cost of keeping it free from mud was so great, that in 1733 the citizens obtained powers from Parliament to fill up the ditch between Fleet Street and Holborn, and to build a market thereon; the Act providing that two spacious arches, of ten feet high and six feet wide, should be made and maintained as common sewers, to carry off the waters of the rivulets and sewers that used to fall into the ditch; and in 1760, in George the Third's reign, when Blackfriars Bridge was built, the remaining part of the Fleet Ditch, from Fleet Street to the Thames, was filled in, and the sewer was extended. The Old (or Hill) Bourne is also now covered over.

"Wall-brook derived its name from the circumstance of its being the only running brook that passed through the City walls. It entered the city near to the east end of Bethlem Hospital, between Bishopsgate and Moorgate, passed on to Lothbury, under St. Mildred's church, Bucklersbury, Wallbrook Street, and Dowgate Hill, into the Thames. It is said to have been in ancient times navigable as far as Bucklersbury. It is now arched over, and houses are built over it in many places.

"Langbourne-water was a long and great stream of water breaking out of the ground at the east end of Fenchurch Street, and running directly west, nearly to the end of Lombard Street, turned to the south and divided into several rivulets, some falling into the Wall-brook, and others running in separate streams to the Thames at Dowgate; the division, or *sharing*, of the stream gave the name to Sharebourne (or Sherbourne) Lane. A watercourse also intersected the Strand at Salisbury Street, and another near Somerset House.

"Besides these running streams there were a great many wells and pools, namely, Holywell, in Shoreditch; Clement's Well, in St. Clement's Inn in the Strand; Clerks' Well, near Clerkenwell Church, so called from the parish clerks of the City of London, who used formerly to meet there for the purpose of representing certain parts of the Scriptures in a theatrical manner. 'These wells,' says Fitz Stephen, 'may be esteemed the principal, as being much the best frequented, both by scholars from the schools, and the youth of the City, when in a summer's

evening they were disposed to take an airing.' Near to Clerks' Well was Skinners' Well, where also plays were in ancient times performed.

"More eastward, towards the Charter House, were Fagges-well, Tods-well, Loders-well and Red-well, which, with another in Smithfield, called the Horse Pool, united to form the River of Wells. Dame-Annis-the Clear Well was in Hoxton, and, somewhat west of this was Perilous Pool, now called Peerless Pool. Without Cripplegate there was a large pool supplied by Crowder's Well, on the north-west side of St. Giles's churchyard. There was a fountain in New Palace Yard, Westminster; and there were two wells in Shadwell, one of which, a fine and clear spring near to St. Paul's church, gave this suburb its name. Besides the above there were likewise many smaller ones, the situation of which may still be discovered by the names of the streets and alleys or places in their neighbourhood, such as Monks' Well, Bride Well, formerly Bridget's Well, &c."

For centuries after these brooks and wells had become insufficient or unusable through the increase of population and of filth, the ignorance of any drainage but by the surface or by cesspools, left them to augment the general noisomeness of the streets; and down to the great fire of 1666, and even later, it is obvious, from the regulations in use for the streets,* that the drainage of the whole town must have been in a very lamentable state; for they are precisely such as would now be applicable to the dirtiest little town in Wales or Ireland. Thus it is provided that "no man shall cast any urine boles or ordure boles into the streets by day or night, afore the hour of nine in the night; and also, he shall not cast it out, but bring it down, and lay it in the channel, under the pain of three shillings and fourpence; and if he do cast it upon any person's head, the party to have a lawful recompense, if he have hurt thereby;" and again, "that no man shall sweep the dirt or filth of the street into the channel in the time of any rain, or at any other time, under pain of six shillings and eightpence;" a provision obviously designed to preserve the waters of the Thames, the Fleet, and Walbrook in purity for the inhabitants to drink; thus poisoning them less obviously, but not less effectually with the air, to save them from being poisoned by the water.

The destruction of nearly the whole city by fire, however, in an age of great material progress, opened the way for an entirely new era in this department of civic economy; and by the "Rebuilding Act" of 1667, (§ 20), it was enacted "that the number and places for all common sewers, drains, and vaults, within the City of London and liberties thereof, and the order and manner of paving and pitching the streets and lanes within the same, should be designed and set out by such and so many persons as the mayor, aldermen, and commonalty of the said city, in common council assembled, should, from time to time, authorize and appoint under their common seal, or the major part of them; to which persons several powers and authorities were thereby given for making new vaults, drains, or sewers, or for cutting into any drain or sewer already made; and for altering, enlarging, amending, cleansing, and scouring of any old vaults, sinks, or common sewers; for the better effecting whereof, it was made lawful for the persons so authorised, or any seven or more of them, to impose any reasonable tax upon all houses

* Bohun, p. 107–12.

within the said city and liberties, in proportion to the benefit they shall receive thereby; and to enforce payment of the same by distress and sale of the goods of the party chargeable therewith. This clause of the Rebuilding Act, which was to remain in force only until the rebuilding should be finished, was made perpetual by the 22nd and 23rd Charles II., c. 17, s. 3, and by the 7th of Anne, c. 9; the persons so appointed are empowered to execute within the city and liberties, all the powers given to be vested in any Commissioners of Sewers in any other county or place, and are to be deemed and taken to be Commissioners of Sewers within the limits aforesaid, subject, nevertheless, to the limitations and directions of the said first recited statute.

Early in the reign of George III., Acts for the better paving, cleansing, and lighting of the city and liberties of London, more expressly vested in these Commissioners the sole power and authority of pitching, paving, cleansing, and enlightening the streets, lanes, &c. within the same; but they were repealed and superseded by the 11th of George III., c. 29, which (explained and rendered more effectual by the 18th George III., c. 66, 33rd of George III., c. 75, 57th George III., c. 29, and the 4th of George IV., c. 114), is the statute by which the Committee of Common Council above described are constituted Commissioners for "making, enlarging, amending, and cleansing the vaults, drains, and sewers, within the city and liberties of London, and for paving, cleansing, and lighting the streets, lanes, squares, yards, courts, alleys, passages, and places, and preventing and removing obstructions and annoyances within the same;" one of its principal views being to make the rates, already raised for paving, cleansing, and lighting, suffice to defray the expense of making new sewers where wanted, and enlarging and altering the old ones, and to charge the expense of *repairing* and *cleansing* the sewers separately upon the landlords or proprietors of the houses and lands within the city and liberties. The older rates are those termed the "Consolidated Rates;" and the rate levied for the latter purposes, the "Sewers' Rate."

In the *city* "there are 88 Commissioners of Sewers appointed under the provisions of the statute 11 Geo. III., c. 29. That statute directs that the Recorder and Common Serjeant shall be Commissioners, and that the remaining Commissioners shall be appointed by the Common Council. The Common Council appoint all the 26 aldermen, and all the 30 deputies, and 30 other Common Councilmen, being one from each ward, or division of ward. The aldermen and deputies, by order of Common Council are annually re-elected; the 30 Common Councilmen hold the office for four years, if they continue to be Common Councilmen, one fourth of the number going out annually. The standing order prohibiting Common Councilmen from being candidates for offices in the gift of the Court appears to be considered inapplicable to this Commission. Other standing orders provide that no placeman or servant of the city, nor member of the Court receiving emolument from the public money, except the coal and corn meters in trust, and members holding commissions in the Royal London Militia, nor any person who has been bankrupt, and has not paid 20*s.* in the pound, shall be eligible to serve on any Committee or Commission appointed by the Court. Where a deputy is disqualified under these orders, an additional commoner is chosen for Commissioner from the Common Councilmen of the same ward or division of ward. If an alderman be so disqualified, his place

is not filled up. A fresh Commission issues every year under the City Seal."*

Seeing that this body is a mere committee of the Common Council, with an allowance as such, and that the property of the sewers, pavements, &c., is expressly vested by statute in the corporation, it is somewhat extraordinary that its members should affect to consider that it does not form a part of the Corporation of London; but the reason may probably be found in the ineligibility for employment by the Commission under which Common Councilmen, in the true supposition, are legally placed, by the standing orders of the Common Council. All question, however, of the real character of this body was set at rest by resolution of the Court of Common Council, on the 20th of January 1837, on appointing the Commissioners for the ensuing year, to the effect "that the Commissioners of Sewers, being appointed by this Court, are hereby declared to be under its direct control, as all Committees appointed by this Court are and ought to be; and the Commissioners are hereby directed to report their proceedings and expenditure to this Court, whenever required so to do by a resolution thereof; and that all applications respecting parliamentary business relating to the Commissioners of Sewers be referred to the Parliamentary Committee."† By a subsequent resolution of the 9th of February, in the same year, the chairman for the time being, of the Commissioners of Sewers, is made a member of the Parliamentary Committee.‡

The Commissioners have by statute the appointment of all their officers. These are a principal clerk, assistant clerk, surveyor, two messengers, three inspectors of pavements, and an inspector of sewers, whose names almost describe their functions. The surveyor directs and superintends under the authority of the Commissioners all works executed in the city in relation to pavements and sewers; measures the work done; examines the accounts, and submits them for payment; draws up such specifications and makes such drawings as may be required; and examines into the applications of individuals, jointly with the Commissioners of their several localities. The senior messenger, besides the usual duties of such a servant, has to keep certain books of hackney carriage fares of Commissioners, of applications, &c. The following is the cost of the whole establishment in 1833, the details of which are here inserted, as affording some idea of the constitution of the several offices of sewers.—(See p. 154.)

The office of the Commissioners is at the Guildhall, where their meetings are held, generally in the Court of Aldermen's Chamber. "Their jurisdiction extends over the whole of the City and Liberties of London, but they do not pave or light the precincts of St. Bartholomew, Duke's-place, or Bridewell, and have no concern whatever with Southwark. The Commissioners meet every Tuesday in the year, except in the month of August. Seven make a quorum; the ordinary number in attendance is from 20 to 30. They sit to hear complaints and to receive applications for liberty to do certain acts which they have power to authorize. The Commissioners meet alternately, morning and evening, and tea and coffee are provided for them. Five or six times a-year they

* Report of Corporation Commissioners, p. 51.
† Minutes of Common Council, 1837, p. 24.
‡ Ibid, p. 31.

A Statement of the Establishment and Expenses of the Commissioners of Sewers for the City of London.

(From the Report of the Revenue Committee of the Common Council in 1836, No. 24.)

Officers and their Emoluments.	From Statutory Funds.			From other Sources.			Total.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
Principal Clerk:—									
Salary from Consolidated Rate Fund .	400	0	0						
Salary from Sewer Rate Fund . . .	100	0	0						
				..			500	0	0
Assistant Clerk:—									
Salary from Consolidated Rate Fund .	300	0	0						
Salary from Sewer Rate Fund . . .	60	0	0						
				..			360	0	0
Surveyor:—									
Salary from Consolidated Rate . . .	500	0	0						
Allowance of 1½ per cent. on new Sewers	112	2	6						
Fees on licensing hoards and scaffolds .	..			40	0	0			
							652	2	6
Senior Messenger:—									
Salary from Consolidated Rate Fund .	123	15	0						
Salary from Sewer Rate Fund . . .	50	0	0						
Allowance for extra services	40	0	0						
Profits on Summonses	..			32	10	0			
							246	5	0
Second Messenger:—									
Salary from Consolidated Rate Account.	111	10	0						
Gratuity from said Fund	40	0	0						
				..			151	10	0
First Inspector of Pavements (East District):—									
Salary from Consolidated Rate Fund .	191	0	0						
				..			191	0	0
Second Inspector (Middle District):—									
Salary from Consolidated Rate Fund .	171	0	0						
				..			171	0	0
Third Inspector (West District):—									
Salary as above	..								
				..			171	0	0
Inspector of Sewers:—									
Salary from Sewer Rate Fund . . .	191	0	0						
				..			191	0	0
To the Chamberlain's Clerks, allowance:—									
From Consolidated Rate Account . .	170	0	0						
From the Sewer Rate Account . . .	30	0	0						
				..			200	0	0
Gratuity to the Hall-keeper and his Assistants	31	10	0						
				..			31	10	0
Allowance for cleaning Offices	8	0	0						
				..			8	0	0
To James Dickenson, late Assistant Clerk, allowance from Consolidated Rate Fund .	100	0	0						
				..			100	0	0
To Amount paid for Tavern Bills of the Commissioners of Sewers for the year 1833	407	1	7						
To ditto for Tea and Coffee	79	19	6						
				..			487	1	1
To sum paid from the City's cash for a Summer Excursion	..			150	0	0	150	0	0
							3610	8	7

have a dinner. They have no line money. Their expenses are charged on the rates levied under the Act.

"The sewers' rate cannot exceed 4*d.* in the 1*l.*, and the consolidated rate cannot exceed 1*s.* 6*d.* The sewers' rate is made by the Commissioners and collected by their officers, whom the Common Council recommend in each ward.* The consolidated rate is made by the Common Council of each ward, in obedience to a precept from the Commissioners, directing them to make a rate at so much in the 1*l.*, and separate officers are appointed in each ward to collect it. The assessed tax book has been generally made the foundation of the sewer rate, and the Common Councils of the wards have usually followed the sewer rate in making the consolidated rate, a copy of which is sent to the Commissioners. The rates are paid into the Chamberlain's office, to the account of the Commissioners, and an abstract of the receipts and payments is printed with the annual account of the city cash. By 4 Geo. IV., c. 114, s. 19, parties who think themselves aggrieved by the consolidated rate, have an appeal to the Commissioners of Sewers. The objection stated in reply to a question, whether these rates might not be consolidated and collected together, was, that one was a landlord's rate and the other a tenant's rate. The bedels of the several wards are generally the collectors of the sewers' rate; they give security, and are paid by a poundage. The collectors of the consolidated rate, in most of the wards, collect gratuitously, and give no security. In Langbourne Ward it has become the custom to take security, and pay the collector by a poundage, since the ward lost 300*l.* by the defalcation of a collector. The same thing is done in Walbrook and in Farringdon Without."†

All property in the sewers and public drains and vaults, and in the pavements in the city and liberties, and in the materials used in the same by the Commissioners, is vested in the Corporation, in whose name the Commissioners are authorized to bring actions, or prefer indictments, against persons damaging or abstracting the same. The whole expenditure on sewerage is now defrayed out of the sewers' rate, without any aid from the consolidated rate, as formerly afforded under the 11th of Geo. III., c. 29; the Commissioners acting with the authority of all other Commissioners of Sewers, exercising the powers conveyed by the special statutes already recited, and deriving some further authority from the Finsbury Sewers' Act of the 18th of Geo. III., c. 66.

In the year ended at Michaelmas, 1833, the income from the sewers' rate was 9,718*l.* 9*s.* 4*d.*, and the expenditure upon the sewers 12,970*l.* 16*s.* 8*d.*;‡ the excess of expenditure being more than defrayed by a transfer of 8,000*l.* from the consolidated rate fund. In the year ended at Michaelmas, 1840, the respective sums were 20,636*l.* 9*s.* 4*d.* and 17,443*l.* 15*s.* 6*d.*, and in the year ended at Michaelmas, 1842, as follows:—

* They are allowed 5 per cent. on the sums they pay into the chamber to the account of the Commissioners.

† Report of the Corporation Commissioners, p. 174.

‡ See Schedule B, No. 49, Part II. c. 8.

An Account of Monies received and paid by the Chamberlain of the City of London, for Making, Maintaining, Enlarging, Repairing, and Cleansing the Vaults, Drains, and Sewers, within the said City and Liberties, pursuant to the several Acts of Parliament of 11 *Geo. III., c.* 29; 18 *Geo. III., c.* 65; *and* 33 *Geo. III., c.* 77; *for One Year ending* 29*th September*, 1842.

RECEIPTS.

	£.	s.	d.
Balance in hand on 29th September, 1841, as per statement delivered to the Honourable House of Commons, 22nd June, 1842	7,283	3	7
To cash on account of arrears of sewer rate, due Christmas, 1840	2,186	9	4
To ditto on account of rate, due Christmas, 1841	12,834	1	7
To ditto, compositions for building sewers	736	10	0
To ditto in reimbursement of the expense of building private drains	505	16	6
	£23,546	1	0

EXPENDITURE.

	£.	s.	d.
By the expense of building new sewers	7,821	13	6
By ditto of making private drains	783	1	0
By bricklayers' work in the repairing of sewers	3,465	9	6
By salaries to officers	815	19	0
By incidental charges and expenses	105	14	6
	12,991	17	6
Balance in hand on 29th September, 1342	10,554	3	6
	£23,546	1	0

Chamber of London, (Signed) W. HEYGATE, *Chamberlain.*
26*th June*, 1843.

The length of the city sewers has been estimated at 15 miles.* The finest sewer is that extending from London Bridge upwards towards Moorfields, which is 8 feet 6 inches high by 7 feet wide; but 5 feet by 3 feet is a common size for the other main sewers. The smaller lengths of sewer are from 4 feet 3 inches by 2 feet 3 inches, to 5 feet by 3 feet; the average being nearly 4 feet 6 inches by 2 feet 6 inches, in accordance with the general rule of the Commissioners not to make any sewer so small that men cannot get in to cleanse it. The City Commissioners proceed without the intervention of a jury. The parties requiring sewers to be made come before them. Their application is considered and referred to a future court. In the meanwhile the surveyor is instructed to ascertain the expense of making a sewer. If it is for private benefit he reports his proceedings, and the party is called upon to pay a portion of the amount, as the case may be; and when the payment is made, the Commissioners advertise for tenders to perform the work, if its cost is likely to exceed 50*l*. Whenever any application is made for opening communications with drains, the Commissioners always employ their own surveyor to do the work, and charge the expense on the party. No private drain can be made to communicate with the public sewers without the licence of the Commissioners, and when made, must be kept in repair by the owners. A large part of the City of London, including Cheapside itself, is to the present day, however, without any underground drainage; its night-soil is kept in poisonous pools, of which the inhabitants pump

* Report of Corporation Commissioners, p. 174.

out the contents into the open channels of the streets in the night, or have them removed by nightmen. Parties applying to have underground drainage would, in fact, be called upon to contribute half the expense of making a sewer. Even where there is a sewer, a guinea fee, divided among the clerks, surveyor, and inspector, must be paid to procure permission to use it. The largest outlets of the city sewerage are the Fleet Sewer, at Blackfriars Bridge, and the Moorgate Sewer, below the Tower; the latter once a wide town ditch on the east, as the Fleet was on the west. Both of them afford passage to upland waters from the Finsbury Trust, the successive improvements and the extension of buildings in which have, at different times, occasioned great injury and loss on these lower levels, for want of simultaneous alterations to dispose of the augmented volume of water descending in time of rain. Indeed, with the exception of Walbrook, these were the only city sewers prior to 1756; all the earlier sewers having been made by private individuals, called adventurers, who, from the time of the Fire, had been encouraged by the Commissioners with authority to receive from those who communicated with the several sewers some contribution towards their cost. Very strong evidence to the fatal effects on health of the cesspool system of the city was given in evidence before the Commons' Committee of 1834;* and yet the same system prevails extensively in other densely populated parts of the metropolis.

The Commissioners for the *Westminster and Part of Middlesex* district of sewers, besides the powers derived from the general statutes of sewers, &c., possess others, under the 47th of Geo. III., c. 7, local and personal, for enlarging the powers and extending the jurisdiction of these Commissioners; under the 52nd of Geo. III., c. 48, local and personal, for empowering the Commissioners to purchase a messuage and premises for holding their meetings and for enlarging their powers; and under the 4th and 5th of Will. IV., c. 96, for enabling the Commissioners to make a new sewer at Bayswater. The parishes wholly or in part within the jurisdiction of the Westminster Commissioners, as well under the 47th of Geo. III., c. 7, as under the terms of the commission itself, are those of St. Clement Danes, St. Mary-le-Strand, St. Paul Covent Garden, St. John the Baptist in the Savoy, St. Martin-in-the-Fields, St. Ann Westminster, St. Giles-in-the-Fields (in part), St. George Bloomsbury (in part), St. Pancras (in part), St. John Hampstead (in part), Wilsden (in part), St. Marylebone, St. Mary Paddington, St. George Hanover Square, St. James Westminster, St. Margaret Westminster, St. Luke Chelsea, St. Mary Abbott's Kensington, and part of All Saints Fulham. Included in the Westminster Commission, but not under the Act above mentioned, are the parishes of Hampton, Teddington, Twickenham, Isleworth, Hanwell, Brentford, Acton, Ealing, Hammersmith, and part of Fulham. The tract comprised under the jurisdiction of the Commissioners is divided into four districts, separately rated, and with a separate expenditure. These are: the eastern division of the Westminster Sewers, the western division of the Westminster Sewers, the Ranelagh Sewer, and the Counter's Creek Sewer. The annual rates are generally 1*d.* in the 1*l.* upon land, and from 2*d.* to 6*d.* on houses. The district of the Ranelagh Sewer is subdivided into three different levels, each separately rated.

The number of Commissioners in 1834 was about 250, nine having been added in that year; but the average attendance at the several

* Minutes of Evidence, p. 113, *et seq.*

meetings of the court during the year 1833 was no more than *eleven*, and very frequently it did not exceed *seven or eight*. "The gentlemen come in and walk out again; they are not men of business; perhaps they do not stop two minutes; still their names are down as gentlemen who attended; and in the list of gentlemen who attended for the day, you would not find one-third of them there united." * * * "Who are the men that form the Commission? Merely friends of one or two who happen to be there before, who have got no interest whatever in the property."* The office establishment of these Commissioners, as then described, consists, in the clerk's department, of a clerk, receiving 500*l.* per annum; one office-keeper and crier, 40*l.*; another office-cleaner, 105*l.*; a bailiff and messenger, 40*l.*; and another, 60*l.*; and, in the surveyor's department, of a surveyor, receiving 400*l.* per annum; a clerk of the works, 200*l.*; a second, 130*l.*; a third, 104*l.*; three others, 312*l.*; one labourer in trust, 80*l.*; one, attending the flaps at Westminster, 65*l.*; one, attending the floodgates and open parts of King's Scholars' Pond Sewer, 54*l.* 14*s.*; making a total charge for officers and servants of 2,390*l.* 14*s.* per annum. The office is at No. 1, Greek-street, Soho-square, and meetings of the court are held twice a month. An engraved plan of the sewers was commenced in 1817, and has been progressively perfected; a copy being sent, with the regulations of the Commissioners, to the vestry of each parish within their active jurisdiction. The total amount received during the ten years, from 1831 to 1840 inclusive, was 233,038*l.* 10*s.* 7*d.*, and the sum expended 230,207*l.* 16*s.* 9*d.*

An Account of Monies received and paid by the Commissioners of Sewers for the City and Liberty of Westminster, and part of the County of Middlesex, in the Year 1840.

Receipts.

	£.	s.	d.
Collected on rates	21,837	5	3
Contributions towards expense of sewers	520	10	0
Contributions towards expense of gully drain flaps	60	15	0
Total	£22,418	10	3

Expenditure.

	£.	s.	d.
Works	18,498	7	11
Establishment	2,495	7	0
Occasional services	264	10	0
Stationery and printing	260	4	8
Office expenses	142	14	0
Law charges	98	0	2
Advertisements	43	14	11
Fees on estreats of fines in Exchequer	1	0	0
Copies of parochial assessments	61	19	0
Expenses of juries	59	9	0
Postage of letters	12	13	5
Wages and expenses of Commissioners	332	4	0
Instalments and interest on 3,500*l.* Exchequer Bills granted towards expense of tunnel sewer in Edgware-road, pursuant to Act 3 and 4 Will. IV., c. 96	287	0	0
	£22,557	4	1

* Evidence of Mr. William Fowler, one of the Commissioners, before the Commons Committee on Sewers in 1834, p. 134.

The sum included under the head of receipts is the net amount applicable to the expenditure, after deducting allowances to collectors, stamps for receipts, deficiencies allowed by the Commissioners on appeal, and assessments unpaid on the closing of the books, and therefore carried forward to the ensuing rate. There are, under this Commission, 134 miles of arched or covered sewers, of which 93 miles are constructed with curved bottoms. "The rest are of old construction, with flat bottoms, which are either rebuilt from time to time, as occasion may require, or a new invert is inserted, varying from a segment to a semi-circle; and as soon as that is done, the necessity of cleansing is superseded, and the sewers have kept themselves in perfect order, without accumulations of soil."* The width of the second-sized sewers is sufficient to permit two workmen to pass each other.

The Commission of Sewers for *Holborn and Finsbury*, and part of the county of Middlesex, is aided by Local Acts of the 18th George III., c. 66, and the 54th George III., c. 219, and comprises the northern parts of the metropolis, distinguished in two divisions, which have a separate rating and expenditure. The Holborn division comprises a large portion of the parish of St. Pancras, of which one-third is included under the Westminster and Regent-street Commissions, and a large portion lies beyond the supposed limits of the rateable jurisdiction of the Commissioners, viz., two miles from the city; and together with this, the whole parish of St. Andrew, Holborn, two-thirds of the parish of St. Giles and St. George, Bloomsbury (of which the remainder is under the Westminster Commission), and the liberty of the Rolls. The Finsbury division comprises the parishes of St. James and St. John, Clerkenwell; St. Luke, Old-street; St. Mary, Islington; St. Sepulchre, Middlesex; St. Leonard, Shoreditch; and the Liberties of Glasshouse-yard and Norton Folgate; but a small portion of St. James, Clerkenwell, and a large part of St. Mary, Islington, are beyond the supposed limits of the rateable jurisdiction, and are therefore exempt from rates. Hornsey, Finchley, and Friern Barnet, are also nominally within the same jurisdiction; but it is actually exercised a very little beyond two miles northward from the city bounds. The number of Commissioners in 1834, was 173, of whom 81 had qualified; but the actual duties of the Commission were, as now, discharged by an acting committee of 15, called the General Committee, and a committee of six, for accounts; the general courts being held only quarterly. The office establishment of this trust, consisted at the same period of two joint clerks, receiving 440*l.* per annum; a surveyor, 171*l.* 5*s.* 6*d.*; a second surveyor, 200*l.*; a summoner and crier, 40*l.*; an office-keeper, 100*l.*; an inspector 100*l.*; a second inspector 100*l*; and a clerk of the courts, 78*l.*; making a total charge, for servants and offices, of 1,129*l.* 5*s.* 6*d.* The office is in Hatton-garden.

Rates of 6*d.* in the 1*l.* are levied without the intervention of a jury, at intervals of two, three, or even four years; and the amount levied and expended in the ten years ended with 1840, was, in the Holborn division, 58,203*l.* 3*s.*, and 53,218*l.* 0*s.* 3*d.*; in the Finsbury division, 56,830*l.* 15*s.* 2*d.*, and 56,027*l.* 8*s.* 11½*d.* The last rate in each of these divisions, of which accounts have been laid before Parliament, is that

* Report made by the chairman to a special court, 23rd December, 1842.

of 1839. The amount levied on the Holborn division, in that year, was 16,473*l.* 18*s.* 10*d.*, of which 15,764*l.* 5*s.* 1*d.*, was collected, at a commission of 6*d.* in the 1*l.*, leaving a deficiency of only 706*l.* 6*s.* 10½*d.*, arising from relief given to parties for unoccupied land and houses, or being over-rated for houses assessed while in progress of erection; deductions in respect of small houses separately assessed, but for which the rates were paid collectively by the landlords at a composition; and other deductions in respect of property situated beyond the supposed limits of the Commission. In the Finsbury division, the amount assessed was 15,759*l.* 12*s.* 9*d.*, of which 15,511*l.* 19*s.* 11*d.*, was collected at a commission of 9*d.* in the 1*l.*, leaving a deficiency of only 958*l.* 2*s.* 4*d.* The expenditure in the two divisions, in that and in the following year, when no assessment was made, was as follows:—

An Account of Monies paid by the Commissioners of Sewers for the Holborn and Finsbury Divisions, Middlesex, in the Years 1839 *and* 1840.

—	Holborn Division.						Finsbury Division.					
	1839			1840			1839			1840		
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
Collector's Poundage and Expenses for Stamps and Brokers. . . .	453	15	3	.	.		581	12	6	.	.	
Works	1,564	19	2	7,491	10	4	6,128	4	7	7,337	16	2
Officers' Salaries, and Clerks of the Works, and Messengers' Wages .	670	1	6	761	6	3	702	15	0	671	6	5
Preparing Rate-books, Contracts, and Bonds; Stamps, Law and Parliamentary Charges; Fees paid at Crown Office; Advertisements; also occasional Allowances to Officers for extra Services; and Payments to Vestry Clerks for Copies of Poor's-rates	80	5	3	52	11	2½	169	18	3	48	1	11½
Printing Forms of Rate-books, Warrants, and other Documents, including the annual Publication of the Accounts	51	1	0	75	16	6	38	19	6	108	15	6
Stationery and binding Rate-books, Books of Account, mounting Plans, Surveying Instruments, and annual Gratuity to Bank Clerks . . .	69	11	11	51	7	4½	57	19	5	68	12	0
Rent, Taxes, and repair of Commissioners' Office; Coals, Gas-lighting, Housekeeper's Wages, and Petty Disbursements for the Office . .	178	8	7¼	151	3	5¾	180	7	9¼	162	10	6¼
Remuneration to persons receiving Damage from the Sewers . . .	.	.		.	.		.	.		11	0	0
The City of London, for annual Rent of the Finsbury Prebendal Estate Sewer, under the Act 18 Geo. III. c. 66	.	.		.	.		150	0	0	150	0	0
Contingent Expenses attending the Commissioners' Meetings, under the Act 54 Geo. III. c. 219 . . .	178	5	11	197	13	6	178	4	9	197	13	0
Total of Expenditure . . .	3,246	8	7¼	8,781	8	1¼	8,128	2	9¼	8,755	15	6¾

There is a separate rating and expenditure, not only for each division but for each district of a main sewer; as for the respective sewers of

Gray's Inn-lane, Holborn, Leather-lane, Field-lane, the Southampton estate, and Chancery-lane, and the northern sewer, in the Holborn division; and those of St. James Clerkenwell, St. John Clerkenwell, St. Luke Islington, St. Sepulchre, Glasshouse-yard, Moorfields, Hoxton, and Churchend, in the Finsbury division.

The Commissioners of Sewers for the *Tower Hamlets* (exclusive of St. Catherine's and Blackwall Marsh), possess only the powers conveyed to them by the general statutes of sewers, and have jurisdiction over nearly all the eastern parts of the metropolis north of the Thames; their Commission comprising the parishes of St. John, Hackney; St. Matthew, Bethnal-green; Christchurch, Spital-fields; St. Paul, Shadwell; St. John, Wapping; St. George in the East; St. Mary, Whitechapel; St. Botolph, Without Aldgate; Trinity, Minories; St. Mary, Stratford-le-Bow; St. Leonard, Bromley; and All Saints, Poplar; the hamlets of Mile-end Old Town, Mile-end New Town, and Ratcliffe; and the liberties of the Tower Without, and the Old Artillery-ground; but parts only of the parishes of St. John Hackney, and St. Leonard Bromley, and All Saints Poplar, are liable to be rated; while that f St. Mary Stratford-le-Bow, is wholly exempt from the Commissioners' ower of taxation.

The number of Commissioners in 1834 was 186, of whom 96 had qualified; and the average in attendance at courts, in 1838, was about 25; but the real business of the Commission is devolved upon an acting Committee, who pass the most important subjects through the Court, but are necessarily the real administrators of the trust; and the number attending in it, during the same year, varied from 6 to 8. The office is at Great Alie-street, Goodman's-fields. Rates at 6*d.*, 9*d.*, and 1*s.* in the 1*l.*, are levied at intervals, generally of 3 years, with the formal intervention of a dining jury; the different amounts being levied according to the exigencies of the "level" or district upon which they are laid. There are seven of these levels, viz., the Spitalfields, Wapping, and Nightingale-lane Level, the Limehouse Level, the Upper Limehouse Level, the Tower-hill Level, the Lower Wapping or Greenbank Level, the Hermitage-street Level, and Hackney Brook Level. The receipts for the whole during the 10 years, ended with 1840, amounted to 74,713*l.* 19*s.* 4*d.*, and expenditure to 67,005*l.* 15*s.* 7*d.* The last general assessment, before the close of this period, was in 1838; but there were some later levies of arrears on Hackney Brook Level.

The length of the sewers within the Tower Hamlets Division, is about 45 miles; viz., 28 of arched sewers with semicircular bottoms, 9 arched sewers with flat bottoms, and 8 of open sewers. From the year 1830, up to the present time, comprehending the entire period of the present and the last preceding commission of sewers, for this district, nearly 60,000 feet, or upwards of 11 miles, of new sewers have been executed and completed in various parts of the district; upwards of 3700 feet of open sewer have been arched over; upwards of 8700 feet of sewers built by individuals, have been taken under the jurisdiction of the Court; and the existing sewers have been constantly and effectually cleansed and repaired.* Such is the statement of the Commissioners; yet of all the districts, there is none more defective than this in underground sewerage.

* Report of the Surveyor to the Court, 11th April, 1843.

An Account of the Monies received and paid by the Commissioners of Sewers of the Tower Hamlets during the Years 1838, 1839, *and* 1840.

—	1838			1839			1840		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
RECEIPTS.									
Collected on Rates	15,470	13	1	7,985	0	6	6,434	0	4
Sundry persons, in aid of building new Sewers	.	.		.	.		400	0	0
Amount of treble Damages recovered from W. Stidolph, in an action brought by him	.	.		0	3	0	.	.	
Total	15,470	13	1	7,985	3	6	6,834	0	4
EXPENDITURE.									
Works	4,338	15	11	5,554	6	6	8,992	17	6
Establishment	1,088	4	0	924	4	9	909	18	0
Occasional Services	.	.		.	.		45	10	0
Stationery and Printing	52	6	7	94	10	5	45	13	8
Office Expenses and Repairs	135	12	0	316	14	5	733	0	7
Law Expenses	259	8	8	203	19	0	27	12	0
Parliamentary Charges	.	.		6	3	0	.	.	
Expenses of Juries, Presentments, Assessors, and Rate-books	121	0	8	243	0	0	123	11	5
Drawing Plans, extra Surveys, and Instruments	.	.		.	.		22	1	0
Contingencies	27	11	0	402	19	2	485	4	0
Compensation for Injury to Premises	7	0	0	5	0	0	14	0	0
Suing out new Commissions	10	10	0	.	.		.	.	
Total	6,040	8	10	7,750	17	3	11,399	8	2

The *Blackwall*, or *Poplar and Stubenheath Marsh* Commission of Sewers, existing solely under the general statutes of sewers, has for its object the original purpose of such commissions, viz., the drainage of a marsh, rather than the sewerage of a city. It comprises only part of the parish of All Saints, Poplar, together with a very small portion of that of St. Anne's, Limehouse; the population of the district assessed, being estimated, in 1834, at only 2,500; and the number of houses assessed, only about 450. The number of Commissioners was 60 or 70; the number who had qualified, about 40; and the number generally in attendance, 7 or 8, though sometimes not so many. Here some of the proprietors are bound by tenure to maintain the river wall next the Thames, and the cost of the rest of the works is defrayed by general assessment. The presentment of the jury is divisible under three heads; first, as to the assessment; second, as to the work to be done by private individuals; and third, as to the work to be done at the general charge of the level; which latter comprises the repairs of sluices, the cleansing the public sewers, and keeping up that part of the embankment which is subject to the general marsh charge.

The proceedings of this Commission, however, while it maintains a separate existence, can scarcely be said to form any part in the economy of the metropolis, except that it levies a large amount of rates

on the West India Dock Company. Between the Blackwall and Tower Hamlets jurisdictions and the river Lee there is yet another tract of Marsh, which is under the Commissioners of Sewers for the Becontree Hundred in the County of Essex, and Bromley West Marsh in the County of Middlesex, whose jurisdiction extends down to Dagenham, and up to Walthamstow.

The Commissioners of Sewers from the river Ravensbourne, in Kent, to the Ember branch of the river Mole, in Surrey, comprise under their jurisdiction over the "*Sewers of Surrey and Kent*," the whole of the metropolis south of the Thames. Their powers in the urban part of this district are extended by a statute of the 49th of George III., c. 183, (1809), "for making new sewers and drains, and amending the present sewers and drains, within certain districts, under the jurisdiction of the Commissioners of Sewers, &c.;" by one of the 50th of George III., c. 144, (1810), for amending, enlarging, and extending the powers of the preceding Act; and by one of the 53rd of George III., c. 79, (1813), for further enlarging the same. These local acts have the effect of dividing the whole district into two parts; one extending from the Ravensbourne, westward to Battersea and Clapham, which is under the provisions of these statutes; and the other extending from thence to East Moulsey, which is still under only the general law of sewers. The local acts were sought by the Commissioners, on account of the great extension of building, and the interruption of the sewers; and they comprise the parishes of St. Paul and St. Nicholas, Deptford, and the manor of Hatcham, in Kent; the five borough parishes of St. George, St. Saviour, St. John, St. Olave, and St. Thomas, with the Clink liberty; the suburban parishes of Bermondsey, Rotherhithe, Newington, and Lambeth; and parts of those of Camberwell, Clapham, and Battersea, all in the county of Surrey. The local acts give the Commissioners power to raise money to make new sewers; but there has always been considerable doubt whether the Commissioners have power to arch over existing sewers, because such a work is beyond a "reform." Rates at a shilling in the pound are made once every two or two and a-half years by the Commissioners without a jury; and under the local acts loans are raised for the execution of new sewers. About 23 or 24 Commissioners usually attend the Court, and they levy rates without the intervention of a jury. The amount received by the Commissioners throughout their whole districts, during the eight years ended with 1840, was 175,137*l.* 17*s.* 9*d.*; and the amount expended, 173,763*l.* 11*s.* 3*d.*—(For Table, see p. 164.)

The still open sewer from Brixton to Vauxhall, liable to dangerous floods, is a reproach to the management of this district, scarcely removed by the clerk's avowal before the Commons' Committee in 1834, that the Commissioners considered it no part of their duty to protect the public against offensive effluvia.

The *Commission of Sewers for Regent-street* has charge, under the local act of the 43rd of George III., c. 121, merely of a single level, carved out of a former more extensive level of the Westminster Commissioners. The Commissioners of Sewers for *East Greenwich Level* attend to the drainage of Greenwich Marshes and the maintainance of a certain portion of the banks of the river Thames; but the town of Greenwich and the other suburbs of the metropolis east of the Ravensbourne are unprovided with sewers.

An Account of the Monies received and paid by the Commissioners of the Kent and Surrey District of Sewers in 1838, 1839, *and* 1840.

—	1838			1839			1840		
RECEIPTS.	£.	s.	d.	£.	s.	d.	£.	s.	d.
Moneys received from Rates, at 1s. in the pound	14,933	15	7	19,489	4	9	17,045	16	2
Moneys received on Loans	.	.		.	.		2,000	0	0
Contributions in aid of New Works	2,914	6	8	744	15	0	3,235	3	9
Incidentals	96	12	6	76	9	0	36	0	0
Receipts from individuals for making private Drains and Archings	1,137	5	6	1,540	16	8	1,235	19	10
Total	19,082	0	3	21,851	5	5	23,552	19	9
EXPENDITURE.									
Moneys paid to Annuitants	2,992	18	8	2,105	8	1	1,688	0	0
Loans repaid	.	.		.	.		2,123	4	11
Interest on Loans	1,926	9	0	1,966	9	0	1,944	9	0
New Works	6,666	16	6	14,466	15	2	10,356	17	4
Old Works, Repairs, and Castings	4,036	7	6	3,830	1	4	5,123	5	4
Officers' Salaries	1,175	0	0	1,175	0	0	1,175	0	0
Sluicekeepers' Salaries	251	11	0	254	14	6	256	17	0
Incidental matters	352	17	9	362	16	2	385	11	6
Making private Drains and Archings for individuals	2,005	18	8	1,959	18	4	1,365	4	6
Total	19,407	19	1	26,121	2	7	24,418	9	7

The Commissioners under all the Commissions are empowered by statute to take a trifling fee from the public rates, of 4*s.* for each day of their attendance upon the affairs of the Commission; but it is now customary for them to be provided, instead, with a public dinner on each day of their attendance; the cost of which is greater than the aggregate amount of their legal fees would have been. The juries and officers of the several Commissions are also treated on public occasions at the public expense.

The whole of the ancient statutes of sewers, it will thus be seen, provide merely an open surface drainage; and until recently, there were still some doubts whether these statutes give to the Commissioners power to make even a new open drain. But with regard to the covered sewers, which are now a necessary part of the economy of all large towns, as they were in the civilized ages of antiquity, they give no express powers whatever; and local acts having but partially supplied this deficiency, the Commissioners of Sewers in the greater part of the metropolis have to the present day *no power whatever to make a new covered sewer.* Incredible as it may appear, it is not to the present day a recognised purpose of several of the principal Boards of Commissioners to protect the public health, by the *covering* of the sewers, from the noisome effluvia of a city's drainage, but only to effect the mechanical transmission of the superfluous fluids to the Thames, with the express protest that "open sewers being preferable for the purposes of sewerage to arched sewers, the Commissioners do not feel they ought to interfere with the effluvia arising from open sewers."* When sewers have been arched over, or newly

* Report of the Commons' Committee in 1834, Minutes of Evidence, Clerks to the Kent and Surrey Commission, &c., p. 97; see also p. 55.

made by private proprietors for the benefit of their property, they are then received into the charge of the Commissioners, and form a part of the general drainage of the district; and are repaired, cleansed, amended, reformed, and rebuilt, from time to time, as may become necessary, at the public expense. Contributions, too, are made towards the execution of many underground sewers of decided public advantage; but from this very proceeding results a gross injustice, for the rating is equal as for a general surface drainage; and thus whole districts are compelled to pay for the advantage merely of particular localities, so long as underground drainage forms no recognised part of the public economy of the town.

Since the Commissioners are not supposed by the law to possess such a thing as an underground sewer, it is not surprising that there are no legal provisions either to compel parties building new houses to the construction of proper sewers opening into them, or requiring a proper side drain to be opened into the nearest sewer from each habitation; but it might have been anticipated that no obstacles would be thrown in the way of arrangements so necessary to health and decency, on the part of the trustees of the public drainage. And yet, by the cavalier tone of an irresponsible administration, the exaction of fees and even fines for the privilege of an outlet, and the monopoly of constructing the required works claimed in some instances for the contractors of the Commission, even though all the expense should be defrayed by the private proprietor, make the attainment of a proper drainage a privilege of price to each individual; of a price, indeed, which all shrink from paying who, or whose tenants, can prevail upon themselves to submit to the existing nuisances, which they most commonly do. Even in the cases where branch sewers are constructed under the direction of the Commissioners, at the cost of the individual, as is common for first-rate houses, the most discordant regulations prevail in different trusts, even as to the form of making them, which, as in the Westminster trust, is obviously very defective; with straight, instead of curved, side walls, exceedingly liable to be crushed in by the contiguous soil. And yet a complete power is possessed by the Commissioners over every individual draining his own property, not only by the authority of the Court, but by their refusal of an outlet, if their instructions are not obeyed.

The regulations of the Westminster Commissioners with regard to the use of sewers when made, will serve as an example of the rules generally observed, where communications with such outlets can be obtained. They are "that no drains shall be laid into a public sewer without a special leave for that purpose from the Commissioners;—that when such leave shall be obtained, the opening into the sewer shall be made, and the drain built, for a length of three feet from the sewer, according to a plan and section approved by the Commissioners; the whole to be done by a workman to be employed by the Commissioners, and paid by the parties requiring the drain, at prices and under regulations specified;—that when builders and other persons are building a sewer, they will be allowed to form the rings required for the drains they may propose to lay into the sewer; in which case such builders or other persons will be required to pay down only the expense of building the 3 ft. 4 in. of drain, next to the ring, which must in all cases be done by a workman employed by the Commissioners;—and that a special leave given for

laying drains into sewers shall remain in force for three months and no longer." It is also pointed out that the lowest pavement of a house ought to be, in ordinary cases, four feet above the bottom of a sewer, to guard the premises from being flooded by water from the sewer; and houses sunk too low are refused communication with the sewer.

The best regulations, with regard to the larger sewers newly constructed by private proprietors, appear to be those of the Holborn and Finsbury Commission, which provide "that all main or leading sewers hereafter to be built within the limits of this Commission, which may receive the sewerage from streets and places containing more than 200 houses, shall be of an *oval* form, 5 feet in height, and 3 feet in width in the clear (except under special circumstances, &c.;)—that all branch sewers, that may receive the sewerage from streets and places containing less than 200 houses, shall be of an oval form, 4 ft. 6 in. in height, and 2 ft. 6 in. in width, in the clear, &c.; and that the current of all such sewers be not less than one-fourth of an inch to every 10 feet in length, and as much more as circumstances will admit, &c."

The several Boards of Commissioners, as we have already shown, even strain the terms of their Commissions and local acts, to contribute towards the sewers which private proprietors are desirous to make, or to perform the work themselves, on the latter contributing the sum agreed. But the use of the sewers as the grand channels for the clearance of the water closets, and even for getting rid of some portion of the more fluid dirt of the streets, is so modern, that it was not permitted, until the commencement of the present century, to drain private dwellings into the sewers, as they are now drained; cesspools and night-carts being the contrivances until then immemorially employed. Respectable plans of the sewers in the hands of the Commissioners themselves are even still more modern; and if they can now generally form at a glance some idea of the justice of the complaints which are brought before them, still the want of any defence against the horrid gases which are generated in the sewers on the new system, and have a ready opening into every street, and in some parts almost every house, keeps the whole town in daily remembrance of the absurdly anomalous state of this part of its municipal administration. Such are the qualities of these effluvia, that even in the aristocratic parish of St. George, Hanover-square, they are obliged to remove the gully-holes from near the butchers' shops, to permit the meat to be exposed for sale without being corrupted.*

It is quite impossible to trace out all the diversities of practice between the different Commissions, whether arising from diversities in the provisions of the local Acts possessed by some, or diversities in the interpretation of those and of the imperfect general statutes which govern all, or diversities in the character and station of the casual administrators of both; but the following summary of the results of their inquiry, drawn up by the Commons' Committee of 1834, contains some valuable observations and suggestions, which are as applicable at the present time as at the date when they were made.

"In most of the districts considerable improvements have been effected since the commencement of the present century; and where just causes of complaint have arisen on the part of the public, they ap-

* Commons' Report of 1834, Minutes of Evidence, p. 59.

pear to have originated in the faults of the *system*, and in a consequent want of power on the part of the Commissioners.

" The defects in the law as it now stands which have most forcibly struck us are these :—

" 1st. *A want of uniformity.*

" There are no two districts in which the law does not vary, or where, if the law be the same, the Commissioners do not interpret some parts of it in a different manner.

" Thus, a man having property in Finsbury and in Westminster, or in the City and in the Tower Hamlets, may find himself placed under different systems, and may be led by his knowledge of the regulations of the one district to violate the regulations of the other. This is a source of much inconvenience.

" 2ndly. *The want of publicity and of responsibility, systematically enforced.*

" There are several trusts in which the Courts have not been open to the public ; where the right of the rate-payers to inspect the accounts is not admitted ; and where, consequently, a real responsibility in money matters can hardly be said to exist.

" 3rdly. *Equality of rateage with inequality of advantages.*

" The principle on which the sewers rates are levied is this : that all houses are liable to them which either receive a benefit from the sewers, or avoid of damage ; and as, directly or indiretly, all are benefited by the surface drainage of the streets, all are liable to the sewers rate. This was a fair principle as long as the surface drainage of the town was alone contemplated ; but, with the increase of civilization, the sewers have become applicable to many other purposes, conducive to the health and convenience of the public, in addition to the surface drainage ; and it appears to the Committee unjust that the same rate should be levied upon houses enjoying the advantages of an underground communication with the sewers and upon houses possessing no such advantages, and which never can possess them without great additions to the sewerage as it now exists. These additions, the Boards of Commissioners, acting under the old law of sewers, have it not in their power to make ; for the old law does not authorize them to make rates for the construction of new sewers, or for covering in old open sewers ; nor does it enable them to compel builders to provide new districts with proper access to the main lines of sewers, or to rate old property for the construction of new sewers in districts where there are now none, even in cases where the consent of a great majority of the householders interested might be obtained.

" There is also a great difficulty in fixing the limits of indirect advantage, where there is no underground communication with the sewers ; for instance, in the Holborn and Finsbury Trust, the inhabitants of the high lands about Hampstead and Highgate are exempted from the payment of sewers rates, although they are unquestionably benefited indirectly by the sewerage of the lower districts between them and the river, which are forced to provide a passage for their superabundant waters. But a Court of Law has decided that they are not liable, and no rate has been levied for many years by the Commissioners beyond a certain line.

" Now the question is, where this line ought fairly to be drawn, and whether there is any distinction, in point of direct advantage, be-

tween the houses on the rateable side of it and the houses beyond that line which are not rated at all.

"The fourth and last defect which your Committee wish to point out, is the want of system or combination between the different trusts, which have now, as before observed, each an independent action.

"The inconveniences in this are palpable; for, where the line of communication with the Thames is not complete within each district, the very improvements in the one trust may prove injurious to the others. It appears by the evidence that a case of this kind occurred not long ago in the City of London, through which a part of the Holborn and Finsbury sewerage is conducted to the river. The sewers of the Holborn and Finsbury division having been greatly improved and enlarged, the City sewers became inadequate to carry off their contents, and a number of houses, in the vicinity of the river were inundated after each fall of rain; the contents of their own drains, in addition to the waters from the high lands in the neighbouring trust, being absolutely forced back into their houses from the volume of water which occupied the main sewer. This has now been remedied at a great expense to the City of London district, and by dint of much labour and time; but if anything like combination had existed previously, the improvements would have been carried on simultaneously, and the inconvenience would never have occurred.

"A variety of suggestions have been made to your Committee with regard to other defects in the present system, as bearing upon the health of the metropolis; and it has been proposed by medical men of considerable eminence, to purify the air in the main sewers, by building furnaces at intervals along their course, and by closing some of the gully-holes, and providing others with traps. Upon these projects your Committee cannot venture to pronounce an opinion, as none of them have yet been confirmed by successful experiments; nor can they be submitted to this test without a considerable expense. The House will perceive, by the evidence of Mr. Farraday, the opinion which that gentleman entertains of their practicability, which is not at present sufficiently strong to warrant any very sanguine expectations as to the results. The minor improvement of traps for diminishing the emission of foul air from the gully-holes has already attracted the attention of the Commissioners in several of the trusts, and appears to have been applied with success.

"Your Committee now come to the changes which they wish to recommend in the law of sewers as it at present stands; and in these the first object of your Committee will be to remove practical defects, with as little change as possible in the forms of the system, with which the inhabitants of the metropolis are already familiar. It is therefore proposed to preserve the existing trusts in their present divisions, for all purposes of local arrangement.

"The composition of these trusts having given rise to much dissatisfaction, because, although consisting of most respectable individuals, a great proportion of these individuals have neither the time nor the inclination to attend the Courts;

"Your Committee suggest the following remedies:—

"1st. That whenever it shall appear in future, by the books of the different trusts (in which a regular entry shall be made for the purpose), that a Commissioner has absented himself from a majority of the Courts

held for his district within the year, such Commissioner shall be considered as having voluntarily resigned.

" 2ndly. That the number of Commissioners in each trust shall in future be fixed.

" 3rdly. That vacancies shall be filled up in the City of London by election by the Common Council, as at present; and in other trusts, by the vestries of the parishes in the respective districts, by rotation, and in proportion to their relative population and rental.

" The Committee is of opinion that the system to be pursued in all the trusts thus constituted should be uniform, the Courts fixed and open (with power, however, to summon extraordinary Courts when required); the accounts subject to inspection by all, publicly audited, submitted annually to Parliament, and copies furnished to all rate-payers on demand, at a reasonable price. Works of all kinds should be performed by public contract, with due notice given, in order to encourage competition, but with the understanding that they are to be subjected, as now, to the approbation of the Commissioners, there being no public works in which the inspection of responsible officers is so essential as in those connected with sewers, where defects, concealed easily, if not at once detected, are sure to be brought to light, by entailing upon the district subsequently a load of vexation and expense.

" Your Committee propose that the power of levying rates, when required, should be continued as at present in the local trusts; and that they should also have a power, under certain limitations, of raising money upon the rates, where improvements in the sewerage of a district are obviously necessary, so as to diffuse the expense more equably over a series of years.

" All that your Committee wish to effect by this, however, is to render improvements practicable where they are undoubtedly desirable, which is not always the case at present, from the want of power and of funds.

" It will be essential, too, in order to facilitate these improvements, and to provide for the health of some old and populous districts of the metropolis, where great inconvenience is now experienced by the inhabitants from the want of sewerage, to remove all doubts as to the jurisdiction of the Commissioners, originating in the obscurity of the present laws of sewers, and to give them in all cases power to cover in, enlarge, widen, or otherwise improve open sewers; to compel builders to provide new districts with adequate communications with the main lines of sewers (the want of which has obliged the Commissioners of Woods and Forests to bring in a special Bill, in order to remedy the nuisance arising out of the sewerage of the Bishop of London's estate); to rate old property for the construction of new sewers, and to oblige all houses thus rated to communicate with the sewers when built.

" The sewers rate in general is regarded as a landlord's rate, but is paid in the first instance by the occupying tenant. Your Committee think, therefore, that it would be expedient that, where there is not a special agreement to the contrary, a receipt given to the tenant by the Commissioners should be in all cases a legal set-off against the rent; while houses untenanted for any length of time, and consequently not contributing to the wear and tear of the sewers, might be allowed a temporary exemption from the rate. With regard to the practicability of

varying the amount of the rates according to the extent of the advantages enjoyed, your Committee do not venture to pronounce any decided opinion. The principle on which an uniform rate was originally established has been already explained; and as long as the sewerage was confined to the surface drainage of a district, it was perfectly just. But now that there are so many other advantages connected with the sewerage, it seems desirable to recognize a distinction which exists, *de facto*, in every part of London; and not, at all events, to impose precisely the same amount of rate on streets and houses which have no private underground drains, because there are no sewers within reach into which to lead them, as upon other streets and houses amply provided with the accommodation of public and private drainage.

"Your Committee regret that it should not be in their power to suggest any practicable mode of correcting that want of combination between the different Trusts, which they have alluded to as one of the defects of the present system; but they see so many reasonable objections to a Central Board, superseding in part, or altogether, the local Trusts, a change which would be most unpalatable to the inhabitants of the respective districts, that they cannot recommend it as desirable until, at all events, the effect of the changes suggested in the present Report, should the House think proper to approve of them, shall have been fairly tried."*

An Examination of the Returns made by the various Railway Companies of the United Kingdom, with respect to their Traffic during the year ending 30th June, 1843. By G. R. Porter, Esq., F.R.S., Treasurer of the Statistical Society of London.

[*Read before the Statistical Society of London, 15th April*, 1844.]

The establishing of railroads to the extent to which the system has now arrived in England, is a fact in various ways interesting and important. That system may be said to have begun with the construction of the short but most useful line between Liverpool and Manchester, in September, 1830. For many years before that time railways had been used for the cheap and easy, but not very rapid, conveyance of great bulk and little value, such as coal and lime; but with the opening of the line just mentioned began the use of the locomotive engine, and the conveyance of passengers at rapid rates of speed. Its success led the way to the immediate construction of other railways in various parts of the kingdom, and it is much to be regretted that means were not at once taken whereby the various effects which these works could not fail to produce upon the social economy of the kingdom might be measured and followed out.

The earliest attempt of the Legislature to supply this information was made in 1840, when the first general Act, known as Lord Seymour's Act, for the regulation of railways, was passed. Under this Act, a department of the Government was created, to which power was given to call for some few among the statistical details which the different companies were qualified to furnish. These details were thereupon required, according to forms so prepared, that in answering them nothing should

* Commons' Committee's Report, 8th August, 1834, Sess. 1834, No. 584.

be left to the discretion of the individual Board of Directors; an essential condition to ensure utility from the facts when collected, consisting in their perfect uniformity. To the working members of this Society it will not excite surprise to find, that, notwithstanding a great amount of care and diligence was employed in framing the questions proposed, the degree of uniformity exhibited in the answers obtained was for some time far from being satisfactory. We know, from personal experience, how difficult a thing it is to bring any considerable number of individuals, acting independently of each other, to place the same facts in the same point of view, or to recognize the value or the importance of one or another part of a subject, the misconception of which, or its absence from a statement, necessarily impairs the accuracy, and therefore lessens the value of the whole. This difficulty has not yet been entirely surmounted, but the returns are now made in a tolerably satisfactory manner by the great majority of railway companies, and it is thought that a brief statement of a few of the results which they exhibit may not be uninteresting. Hereafter we may hope to have these facts presented to us in a more perfect form, and to be able to trace the effects of railway communication upon branches of social economy beyond those to which our inquiries are at present necessarily limited.

The returns made by the various companies, showing the number of passengers conveyed on railways in the United Kingdom, distinguishing the classes of carriages in which they travelled, and stating the money receipts of the companies therefrom, and for the conveyance of goods, during the year between 1st July, 1842, and 30th June, 1843, present the following results.

These returns embrace 63 lines of railway, of which 46 are in England and Wales, 15 are in Scotland, and 2 are in Ireland; but 4 of those in Scotland are worked wholly by means of horse traction, and do not properly come into the railway system. Of the remaining 59 lines there are 53 which have made perfect returns as to the number of passengers conveyed, and their separation into classes; viz. 46 in England and Wales, 10 in Scotland, and 2 (all now in operation) in Ireland. The remaining companies, of which 5 are in England and 1 in Scotland, have not classified their passengers. The 53 companies have made returns which are complete, both with respect to the number and the classification of passengers conveyed, and the amount of gross revenue derived from each class.

The number of passengers, thus classified, who were conveyed by these 52 lines of railway, during the year ending 30th June, 1843, was 21,620,535; viz.

First Class Passengers	4,223,249
Second Class Passengers . . .	10,968,061
Third Class Passengers	6,429,225
	21,620,535

The per centage proportions were as follows:—

First Class	19·53	per cent.
Second Class	50·73	,,
Third Class	29·74	,,
	100·00	

Considered with reference to the divisions of the kingdom, the passengers conveyed on the 51 lines were:—

—	England and Wales. 40 Lines.	Scotland. 10 Lines.	Ireland. 2 Lines.
First Class Passengers.	3,882,171	245,757	95,321
Second Class Passengers	8,951,070	877,055	1,139,936
Third Class Passengers	4,060,321	1,529,717	839,187
	16,893,562	2,652,529	2,074,444

The per centage proportions of these numbers are:—

—	England and Wales.	Scotland.	Ireland.
First Class	22·98	9·27	4·60
Second Class . . .	52·99	33·06	54·95
Third Class. . . .	24·03	57·67	40·45
	100·00	100·00	100·00

The money received from the above 21,620,535 passengers was 3,063,032*l.*, and was paid by each class of passengers and in each division of the kingdom as follows:—

—	England and Wales.	Scotland.	Ireland.
	£.	£.	£.
First Class	1,326,015	41,501	4,164
Second Class. . . .	1,186,802	60,300	32,993
Third Class	331,985	59,881	19,391
	2,844,802	161,682	56,548

The proportionate receipt from each class of passengers was:—

First Class	46·61	25·67	7·37
Second Class. . . .	41·72	37·29	58·34
Third Class	11·67	37·04	34·29
	100·00	100·00	100·00

The average charge to each passenger was as follows:—

	s. d.	s. d.	s. d.
First Class	6 10·00	3 4·57	0 10·48
Second Class. . . .	2 7·82	1 4·50	0 6·94
Third Class	1 7·62	0 9·39	0 5·54

Embracing the three divisions of the kingdom in the calculation, the average charge to each passenger by the various classes of carriages was:—

	s. d.
First Class	6 5·95
Second Class	2 4·01
Third Class	1 3·35

The great difference that exists between the average fares paid in England, Scotland, and Ireland is doubtless occasioned by the greater length of the English lines of railway beyond those of Scotland and Ireland, and the greater length of the Scottish lines beyond those of Ireland. This causes the average distances travelled by each passenger to follow something like the same proportion. Of the two Irish lines, that between Dublin and Kingstown is only 5⅔ miles, and the Ulster Railway as yet is opened for only 25 miles, between Belfast and Portadown. The longest line hitherto finished in Scotland is that between Edinburgh and Glasgow, which is 46 miles long, while in England the Great Western Railway, with its extension from Bristol to Beambridge, on the way to Exeter, is 171½ miles long, and by four different but continuous lines a traveller may proceed in one direction from London to Darlington, a distance of 263 miles.

In framing the returns which the various railway companies have been called upon to make, it was sought to obtain an account of the average distances travelled on the various lines by each passenger, and the aggregate number of miles passed over by the millions of passengers, who avail themselves of this method of travelling; but the design in calling for this information has been misunderstood in so many instances that it is not possible to deduce from the returns any satisfactory result in this particular. It may hereafter be possible, by explanation, to induce the companies so to keep their accounts as to make this return with accuracy, so that data may be obtained whereby to compare one year with another, and one part of the kingdom with another, in regard to this very significant indication of the national progress. While the Government duty on passengers was levied in respect of the distances travelled by each passenger at the rate of one-eighth of a penny per head per mile, this information was accurately afforded; but when this rate was commuted into a per centage (5 per cent.) upon the gross receipts arising from the fares of passengers, the companies were no longer compelled to keep the account by means of which the mileage was ascertained, and they have almost all of them neglected to comply with the request made to them to that end. The sum received by the Government on account of this tax, and the mileage which that sum represented in each year, from 1838 to 1841, were as follows:—

	£.	s.	d.				
1838—	39,570	16	0;	equal to	75,975,946	persons carried one mile each.	
1839—	72,716	19	8	,,	143,616,608	,,	,,
1840—	112,427	11	10	,,	215,860,976	,,	,,
1841—	159,779	0	0	,,	306,775,680	,,	,,

From which it would appear that in the short period between 1838 and 1841, the amount of railway travelling was quadrupled throughout the kingdom.

Having no complete returns of the actual number of passengers travelling by railways during those years, it is, of course, impossible to determine the average distance travelled by each passenger. In the course of the year 1842,* the system of charging the duty was altered, as already stated; and being thus deprived of one element of the calculation when we had tolerably well succeeded in acquiring another that had been wanting, we are in no better condition than we were for

* 1st August.

accurately testing the progress of railway travelling in this important particular. When the change was made from a specific to a per centage duty, it was believed that 5 per cent. upon the gross receipts would prove a fair equivalent for the fixed sum according to distance that was previously charged; but although this might be the case with respect to lines which maintain a high rate of fares, the calculation certainly does not hold good with railways charging low fares. The Scottish lines mostly belong to the latter class, and although there is no reason to believe that fewer persons travelled by railway, or that they accomplished a fewer number of miles distance in 1843 than they accomplished in 1842, there was a falling off in the amount of duty in the latter year of fully 40 per cent.: on the English lines the falling off was about 3 per cent., and as it is not probable that railway travelling was lessened in 1843, but rather the contrary, it results that the change in the duty has been profitable to the English lines also. One chief ground upon which the change was advocated by the companies was, that a fixed charge on the part of the Government tended to make high fares necessary, and that if the directors were relieved from this difficulty, they would be at greater liberty to adjust their rates of fare according to the capabilities and convenience of the public.

The returns from which the foregoing statements and calculations have been derived, embrace, as already stated, 59 lines upon which passengers are conveyed by locomotive power; but owing to the imperfect manner in which the particulars have been given by 6 of those companies which have neglected to classify the passengers, the numbers used have reference to only 53 distinct railways. If we include the returns made without classification by the 6 companies previously excluded, and the 4 Scottish lines worked by horses, we find that during the year ending 30th June, 1843, there were conveyed,—

In First Class carriages . .	4,276,540	passengers, or	18·22	per cent.
In Second Class carriages .	11,198,512	,,	47·72	,,
In Third Class carriages .	6,431,911	,,	27·41	,,
By Mixed Trains, of which no classification has been made	1,559,933	,,	6·65	,,
Total	23,466,896		100·00	

If stated according to the divisions of the kingdom, the numbers were,—

——	England and Wales.	Scotland.	Ireland.
First Class	3,919,570	261,649	95,321
Second Class . . .	9,163,758	894,818	1,139,936
Third Class . . .	4,063,007	1,529,717	839,187
Mixed	1,147,002	412,931	. .
	18,293,337	3,099,115	2,074,444

These numbers must not be taken as absolutely correct data for estimating the locomotive habits of the people in the various divisions of the kingdom. Many English-born persons must be included among the railway travellers of Scotland and Ireland, while many natives of those divisions would be found among the travellers in England. The principal part, however, who journey in the several divisions of the kingdom are doubtless natives of those divisions; and if we assume them to be

wholly so, or that the variations from this assumption are experienced in equal proportions among them, we shall see, that during the 12 months under examination, there were of railway travellers for each 1000 inhabitants:—

1,149 persons in England and Wales,
1,182 persons in Scotland,
253 persons in Ireland,

the small proportion of Ireland being manifestly attributable to the comparative insignificance of the means hitherto provided there for the purpose.

If we compute the proportions in the three divisions of the kingdom, according to the number of inhabitants, and the length of the railways provided for their use, we find that there were in 1843:—

In England and Wales, 1856¼ miles of railway for a population of 15,911,725, or 1 mile of railway for 8572 persons.

In Scotland, 227¼ miles of railway for a population of 2,620,610, or 1 mile of railway for 11,532 persons.

In Ireland, 31 miles of railway for 8,175,238 persons, or 1 mile of railway for 263,717 inhabitants.

In the United Kingdom 2114½ miles of railway for a population of 26,707,573, or 1 mile of railway for 12,630 persons.

And that for each mile of railway opened, there were,—

In England and Wales . . .	9,855	passengers.
In Scotland	13,637	,,
In Ireland	66,917	,,
In the United Kingdom . . .	11,098	,,

Of the 63 railroads comprehended in the table whence the foregoing calculations have been derived, 60 have stated the amount received by them during the year, for the conveyance of carriages, horses, cattle, minerals, and general merchandise; the other 3 lines are for very short distances, and where goods are not conveyed.* The amount of receipts from this source was,—

In England and Wales . . .	£1,303,291,	or per mile	£702
In Scotland	114,839	,,	505
In Ireland	6,802	,,	219
	1,424,932	,,	674

The total receipts of the 63 lines of railway for the conveyance of passengers and goods, taken together during the year was:—

——	Passengers.	Goods.	Total.
	£.	£.	£.
England and Wales .	2,883,876	1,303,291	4,187,167
Scotland	169,833	114,839	284,672
Ireland	56,548	6,802	63,350
Total . . .	3,110,257	1,424,932	4,535,189

The receipts for each mile of railway were therefore,—

In England and Wales	£2,255
In Scotland	1,252
In Ireland	2,044
In the United Kingdom	2,145

* The table contains returns from 3 lines—2 in Scotland and 1 in Wales—which do not convey passengers: the amount paid for the conveyance of goods was therefore collected upon 63 railways.

From calculations carefully made by Mr. Laing, it appears that the average cost per mile of the various passenger railways in the kingdom has been 34,360*l.* If lines used principally for transporting coals and metals are included, the average cost per mile is reduced to 30,380*l.* and the average cost per mile of the whole, in England, has been 31,522*l.*, in Scotland 22,165*l.*, and in Ireland 22,187*l.*

The gross receipts during the year were therefore in proportion to cost—

In England	7·15 per cent.
In Scotland	5·65 ,,
In Ireland	9·21 ,,
In the United Kingdom . .	6·80 ,,

The returns made to the railway department, by the different companies, of their traffic during the year ending 30th June, 1842, were not given with the same completeness as those for the following year, to which our attention has been hitherto directed. From a close and careful examination of the accounts given for the two yearly periods, it results that a comparison can be made of the total number of passengers conveyed and the gross amount of revenue received upon 45 railways, of which 37 were in England, 6 in Scotland, and 2 in Ireland. This comparison, although it will correctly exhibit the results of the working of the identical 45 railways which it comprehends, must not be received as an exact indication of the result of the railway system throughout the kingdom. It appears that on those 45 lines, there was a small falling off in the year ending 30th June, 1843, both in the number of passengers (268,601), and in the amount of their fares (50,803*l.*), but it is highly probable that in the earlier year many persons travelled by some of the 45 lines, who in the following year have taken advantage of other lines since opened, which have offered greater convenience. The passengers conveyed in the year to Midsummer, 1843, beyond the number conveyed on the 45 lines brought into comparison, were 5,203,354 in number, and the fares paid by them amounted to 430,325*l.* That the use of railways for the conveyance of goods is on the increase, may be inferred from the fact, that on the 45 lines brought into the comparison, there was an improved receipt, in the latter year, of nearly 15 per cent.

The result of such comparison of the 45 lines, making returns in both years is as follows:—

	England.		Scotland.		Ireland.	
	Year ending June 30.		Year ending June 30.		Year ending June 30.	
	1842	1843	1842	1843	1841	1843
Number of Passengers Conveyed	15,239,310	14,801,817	1,246,030	1,387,281	2,046,903	2,074,444
	£.	£.	£.	£.	£.	£.
Receipts from Passengers	2,614,373	2,567,086	62,143	56,298	54,219	56,548
Receipts from Goods, &c.	1,008,677	1,143,475	31,393	38,463	2,015	6,802

Total number of passengers in the whole 45 lines, year ending June 30,		1842 . . .	18,532,143
Ditto ditto . .	,,	,, 1843 . . .	18,263,542
Total receipts from passengers	,,	,, 1842 . .	£ 2,730,735
Ditto ditto	,,	,, 1843 . . .	2,679,932
Total receipts from goods, &c.	,,	,, 1842 . . .	1,042,085
Ditto ditto	,,	,, 1843 . . .	1,188,740
Total receipts from passengers and goods . .	,,	,, 1842 . . .	3,772,820
Ditto ditto . .	,,	,, 1843 . . .	3,868,672

Even with the explanation that has been offered, these figures are far from exhibiting any satisfactory progress. That the number of passengers using the considerable number of 45 railways, should, under any circumstances, have been absolutely smaller in the later, than it was in the earlier year, can only be fully accounted for by calling to mind the state of depression in which so many branches of the national industry had for some time been placed, and the effects of which would necessarily become greater with the protracted continuance of the cause. The change in this respect, which now appears to have set in, may be expected to exhibit a very different result, and it will be a cause for great surprise, as well as of disappointment, if the returns for the year that will end at midsummer next, shall not exhibit a very marked improvement upon those of preceding years.

It may be interesting to compare in some particulars the working of our railways with those of Belgium, the only country in Europe, besides our own, in which such works have hitherto been carried on as a system, and where the results have been published.

At the end of 1842, there were in operation in that kingdom, 282 miles of railways, the average cost of constructing which was 17,120*l.* per mile, while the average cost in this kingdom has been 34,360*l.* or just double the cost in Belgium. This difference results from a variety of causes. In the first place, the works being undertaken by the government, there were no expensive parliamentary contests; no opposing interests to be bought off; no unreasonable compensations to be paid for land; and from the nature of the country, there were comparatively few engineering difficulties to be overcome. Besides these circumstances there has been much present saving effected in the manner of executing the works, which have been performed in a less perfect manner than would satisfy the magnificent ideas of our engineers.

The number of passengers conveyed along the various lines in Belgium, in 1842, was 2,724,104, or 662 for each 1000 of the population, the proportion in the United Kingdom having been in the year ending 30th June, 1843, 879 for each 1000 inhabitants, or 33 per cent. greater than in Belgium.

The proportions using various class carriages, were:—

	In Belgium.	In the United Kingdom.
1st Class	9 per cent.	19 per cent.
2nd Class	25 ,,	51 ,,
3rd Class	66 ,,	30 ,,
	100	100

The receipts from passengers during the year were, in Belgium, 187,372*l.*, or 1*s.* 4½*d.* per passenger against 2*s.* 2¾*d.* in the United Kingdom. The proportions in which the receipts were contributed by the three classes of passengers were:—

	In Belgium.	In the United Kingdom.
1st Class	23	45
2nd Class	25	42
3rd Class	52	13
	100	100

The average distance travelled by each passenger in Belgium, is stated to have been $7\frac{3}{4}$ leagues, or about 19 miles. Mr. Laing computes the average distance in this country at $13\frac{1}{3}$ miles. This shows us the comparative cheapness of fares in Belgium, where passengers are conveyed on the average 19 miles for 1*s.* $4\frac{1}{2}$*d.*, while in England the average fare is 2*s.* $2\frac{3}{4}$*d.* for $13\frac{1}{3}$ miles. This difference results in great part from the much larger proportion of travellers who in that country use the cheapest class of carriage.

In Belgium there was in use in 1842, 1 mile of railway for every 14,601 inhabitants, the proportion in the United Kingdom having been 1 mile for 12,630 inhabitants.

The number of passengers in proportion to the length of railways was, for each mile 9695 passengers in Belgium, and 11,098 in this kingdom.

The total receipts for each mile were,—

	In Belgium.	In the United Kingdom.
	£.	£.
From Passengers	664	1,471
From Goods	394	674
	1,058	2,145

The gross receipts, in proportion to cost, are therefore found to be, in Belgium $6\frac{1}{8}$ per cent., and in this kingdom $6\frac{4}{5}$ per cent.

Observations on Certain Passages in the Report of the Irish Census Commissioners. By Henry Hallam, Esq., F.R.S., one of the Trustees of the Society.

[*Read before the Statistical Society of London, 15th April,* 1844.]

My dear Sir, *Wilton Crescent, March* 14, 1844.

The late Report of the Census Commissioners for Ireland contains so rich a harvest of facts interesting to the lover of statistical inquiries, and gives such proofs of labour and diligence in those by whom it has been compiled, that it becomes more important to point out any casual inaccuracy that may have crept into it, than in a less authorized publication, or one less likely to be of enduring reputation. I shall, therefore, make no apology for troubling the Society with a few observations on one part of the Report.

In page 42 a table is given, "exhibiting," the Commissioners say, "the tendency to marriage at different ages, for the entire kingdom, in the towns and in the country." It is headed, "Proportion unmarried of 100 of the population of the respective ages;" and these ages are arranged in five columns. The proportion above mentioned does not refer to the entire population, though it is rather equivocally worded, but to that of each age respectively. And it is inferred by the Commissioners, that "as to males, 7 per cent. in the country and 13 per cent. in the towns are married at 25 years of age; and that, as might be expected, the greatest proportion of men marry between the ages of 26 and 35." It is observed afterwards, that "females marry earlier than males; accordingly it will be seen by the table that 19 per cent. in the country and 21 per cent. in the towns are married at the age of 25."

That less than one-tenth of the male adult population (that is, above

the age of 17), and only one-fifth of the female, should be married by the time they attain the age of 25, is so contrary to the experience of almost every country, and especially to all that which we have heard of the habits of the Irish people, that when I first read a *précis* of the Report in the last number of the Statistical Journal, I was exceedingly staggered by this statement, and have endeavoured to trace the origin of what seemed to be an evident mistake. One source of error is obvious on the face of the table in the Report; namely, that it confounds the average ratio of married persons to the living population within a period of several years, that is, between the ages of 17 and 25, with the simple ratio of such persons to that population in the last year of the period. It might be, that among a large number of females between the ages of 17 and 25, only one-fifth are actually married; but it would be a singular inference that no greater proportion of those who have just reached the latter age are so.

It is to be observed, also, that the proportion of married persons to the population of any given age does not give us the average age of contracting matrimony; because a considerable portion of the population die without marrying at all. Yet the Commissioners seem to draw inferences from their table as to the average age of matrimony among those who do actually contract it.

I have taken the pains to calculate the mean age of matrimony in Ireland from the table in the Appendix to the Report, p. lxxvi. According to the general summary of all marriages contracted in Ireland for 11 years, from 1830 to 1840, the whole number is 545,849; but of these 39,197 males and 23,644 females have no ages specified. Deducting these, we have 506,752 males and 522,205 females. Now 44,267 marriages of the former sex appear to have been contracted under 20 years of age, being 8·7 per cent. of the whole, and, including of course these, 209,931 under 25; being 41·3 per cent. of the whole. Among females, we shall find 153,312 under 20, being 29·4, and 363,070, being 69·7, of the whole number under 25 years of age. The inference is, that the mean age of matrimony with men is about the 27th, and with women about the 23rd year of life. I have not adverted to second marriages, which would make the mean point a little earlier, but for which no great allowance need be made at that period of life. Yet the Report says, "the next period, from 26 to 35, is the age at which the greatest number of marriages takes place, as well among women as men." The tables in the Appendix give 221,880 marriages among men, or about 44 per cent. for this period, which is certainly greater than in the preceding; but among women we find only 133,277, or about 25·2 per cent. It seems impossible to reconcile these tables with the shorter one in the body of the Report, p. 42, and the former are surely entitled to more regard.

This discrepancy might be explained if the tables in the Appendix should prove to be compiled from other sources than those on which the Report has relied. The mean age of marriage, as deduced from the Appendix, appears to be rather earlier, at least among women, than in England; but this is only agreeable to what we have always heard, and is what we shall more readily receive, than so extraordinary a lateness of marriage as the Report would lead us to suppose.

The Report contains a table, "showing the general results of the

branches of vital statistics, births, marriages, and deaths, in the ratio which they bear to the community. It will be seen that the births average one to three, which is so near the result obtained in other countries, as to make it probable that they are very near the truth. The marriages are obviously much too few, being by the table only 1 to 181; whereas they can scarcely be, in reality, less than 1 to 128. The deaths we have already shown, from other sources, to be in defect about one-fourth." It is afterwards observed that "these results can only be considered as approximations. The returns are incomplete, and the causes of fluctuation are so numerous and so uncertain, that we abstain from various interesting deductions which the subject invites; still trusting that these tables, as well as those on vital statistics generally, will be found to afford, even in their present state, much curious material to the general statist," p. 51.

I should be sorry to dispute what is so modestly urged; yet I cannot help observing, that while it is most true that, in statistics, we must often satisfy ourselves with approximations, it seems an extensive use of that word to cover errors of 25 or 30 per cent. The deaths and marriages, as the Report admits, are in defect, at least, to that degree. The returns of births, the Commissioners hope, "are very near the truth, since they average one to three, which is near the result obtained in other countries." I can annex no meaning to births averaging one to three, and after much consideration, can only presume it to be a mis-print. It certainly does not relate to the ratio of births to marriages, which is greater than three to one in every entire country known to us, though it may be less in particular localities. In fact, the calculation of births made in the Report, p. 40, compared with the table of marriages, would give considerably more than four births to a marriage, perhaps as high a figure as 4·6, which is that of Belgium. But as the marriages in Ireland are supposed by the Commissioners to be very defectively returned, we cannot rely at all upon this. Yet the age of marriage in Ireland appears to be rather earlier than in England, and general opinion does not favour the notice of any peculiar curse of barrenness on Irish women. We find, indeed, a startling assertion in a note to p. 12 of the Report, that the average number of children in an Irish family is considerably lower than in a Scotch or English one, "in accordance with the well known law, that the most marrying race have the lowest cypher of fecundity." But as we cannot possibly admit that such a law is well known, or see the slightest ground for believing it to be a law of nature at all, it seems much more reasonable to presume error in the particular tables from which this assertion is derived. It is evident that if the number of living children in Irish families were to those in English or Scotch only as 2·34 to 3, we must account for it by some extraordinary mortality in the first years of life, nothing of which has been reported, and it would be inconsistent with the rate of increase of Irish population, which, in the judgment of the Commissioners, has not been less during the last decennial period than before, though, through the effects of emigration, it has not shown itself so favourably in the Census.

I am, dear Sir,

Faithfully yours,

HENRY HALLAM.

J. Fletcher, Esq.,
&c. &c.

PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

Fifth Ordinary Meeting, March 18, 1844.

THOMAS TOOKE, Esq., V. P., in the Chair.

The following gentlemen were elected:—

T. Milner Gibson, Esq., M.P.	Thomas Trevethan Spicer, Esq.
John Meeson Parsons, Esq.	Charles Creag, Esq.

The following gentlemen were proposed as candidates for admission into the Society:—

Frederick R. Manson, M.D. James Reid, M.D.
Frederick Pigou, Esq.

The following letter from Major Graham was read:—

SIR, *General Register Office, March* 12, 1844.

I HAVE the honour of informing you that I have received His Royal Highness Prince Albert's commands to transmit to you the accompanying "Tableau Général des Décès du Canton de Genève pendant l'année 1842," composed by M. Marc d'Espine; and in forwarding it to the Statistical Society of London I am honoured with Her Majesty's commands to express Her Majesty's gracious wish that it may be deposited with other documents of a similar nature in the library of that Society.

I have the honour to be, Sir,
Your faithful servant,
(Signed) GEORGE GRAHAM.
Registrar-General.

To Joseph Fletcher, Esq.

A paper was read by Joseph Fletcher, Esq. entitled, "The Metropolis, its boundaries, extent, and divisions for Local Government, with especial reference to its means of sewerage," being a continuation of the paper read at the last meeting.—See p. 103.

Sixth Ordinary Meeting, April 15, 1844.

The following gentlemen were elected:—

Frederick R. Manson, M.D. James Reid, M.D.
Frederick Pigou, Esq.

Thomas Drane, Esq., was proposed as a candidate for admission into the Society.

The papers read were:—

1. "Observations on the late Report of the Census Commissioners for Ireland," by Henry Hallam, Esq., F.R.S.—See p. 178.
2. "An Examination of the Returns made by the various Railway Companies of the United Kingdom with respect to their traffic during the year ending 30th of June, 1843," by G. R. Porter, Esq., F.R.S., Treasurer.—See p. 170.

Seventh Ordinary Meeting, May 20, 1844.

The following gentlemen were formally admitted Fellows of the Society:—

Frederick R. Manson, M.D. James Reid, M.D.
Thomas Trevethan Spicer, Esq.

*

Thomas Drane, Esq., was elected a Fellow of this Society.

The following gentlemen were proposed as candidates for admission into the Society:—

Thomas Hodgkin, M.D. William Humphry Freeland, Esq.
Alfred Rhodes Bristow, Esq.

A paper by Dr. Guy was read, entitled:—"A Third Contribution towards a Knowledge of the Influence of Employments on Health."

BILLS OF MORTALITY.

The district of Wandsworth was added to the metropolis at the beginning of the year 1844; and the return for the present quarter is derived from 115 districts, divided into 576 Registrars' districts. Thirty-four of the districts are included in the metropolis; and the remaining eighty-one districts comprise, with some agricultural parishes, the principal towns and cities of England. The population was 6,578,912 in 1841.

Table I.—46,041 deaths were registered in the winter quarter of 1844; namely, 13,471 in the metropolis, and 32,570 in the other eighty-one districts; the average of he corresponding quarters of 1838-42 having been 13,266 for the metropolis, 32,085 for the other districts, 45,351 for the metropolis and the other districts together. The deaths were, therefore, 690 above the average of those five winters. 400 of the excess being subtracted for the additional day in leap year, 290 are left.

But the population has been found at all the censuses to be increasing rapidly in the town districts, partly by the excess of births over deaths, and partly by immigration. The population of the fifty-nine most populous districts in the return increased at the rate of 6·3 per cent. every four years, from 1831 to 1841; and it is, therefore, probable that the population did not increase less than 5 per cent. in the four years from the winter quarter of 1840 to the winter quarter of 1844. The average with which the 46.041 (—400) deaths in the quarter ending March 31st, 1844, should consequently be compared, is 47,619.

Table III.—The *Metropolis* has been less healthy than in previous years; but the mortality is not so much above the average as in the Autumn quarter of 1843. The average employed in the Table was derived from the returns of the five years, 1839–43. It will be observed that 252 persons died of *Small-pox*, which was fatal to only 114 persons in the preceding Autumn quarter. The great majority of these persons were children, and had not been vaccinated. *Measles* and *Scarlatina* were declining, yet 334 persons died of the former, 536 of the latter disease. Influenza, bronchitis, and pneumonia destroyed more than the average number of lives in the metropolis; and their fatality, particularly among the aged, is mentioned in many of the reports from the other districts. The deaths registered from dropsy, cancer, scrofula, heart disease, apoplexy, paralysis, tabes mesenterica, were above the average in number; those from childbirth, as well as violent and sudden deaths, were below the average. *Two* deaths happened from hydrophobia.

The quarterly meteorological table has been compiled from the valuable weekly tables supplied by the *Astronomer Royal*. Upon comparing the results with those obtained from the observations of Mr. Henry, it will be seen that the mean temperature of the air has been a little below that of the season.

Districts in which the mortality was *higher* than the average mortality of *Winter* in the same districts:—Brighton, Winchester, Windsor, St. Albans, Wycombe, Northampton, Bedford, Cambridge, Yarmouth, Dorchester, Exeter, Plymouth, Kidderminster, *Birmingham*, *Aston*, Coventry, *Lincoln*, Wigan, *Abergavenny*, *Merthyr-Tydfil*, Anglesey.

Districts in which the mortality was *lower* than the average mortality of *Winter* in the same districts:—The central districts of the metropolis, Cheltenham, Walsall, Wolverhampton, Stockport, Macclesfield, Preston, Bolton, Prescott, *Manchester*, Salford, Sheffield, Leeds, Sunderland, Gateshead, Newcastle-on-Tyne, Cockermouth, Pontypool.

MORTALITY OF THE COUNTRY.

Quarterly Table of the Mortality in 115 *of the Districts of England (including the principal Towns) showing the Number of Deaths registered in the Six Years, the Average Number of Deaths in the Five Winters,* 1838-42, *and the Number of Deaths in the Winter Quarter of* 1844, *ending* 31*st March.*—(*Continued from p.* 89.)

DISTRICTS.	Population 1841.	Annual Deaths Registered.						1838–42 Quartly. Average†		Deaths in the Winter Quarter, ending Mar. 31, 1844.
		1838	1839	1840	1841	1842	1843	Of Five Years.	Of Five Winters.	
*Metropolis.**										
West Districts .	301,326	8,114	6,538	6,936	6,599	6,826	7,212	1,751	1,952	1,975
North Districts.	366,303	8,944	7,890	8,594	8,261	8,550	9,038	2,112	2,370	2,480
Central Districts	374,759	10,844	9,751	9,108	9,333	8,873	9,547	2,395	2,704	2,547
East Districts .	393,247	12,434	10,359	10,063	10,004	9,947	10,960	2,640	2,895	2,975
South Districts .	479,469	13,210	11,562	12,329	11,872	11,918	12,575	3,044	3,346	3,494
Total . .	1,915,104	53,546	46,100	47,030	46,069	46,114	49,332	11,943	13,266	13,471
South Eastern Division.										
Maidstone . .	33,210	737	726	700	648	815	774	181	203	218
Brighton . .	46,742	916	898	980	1,102	1,126	1,117	251	255	329
Isle of Wight .	42,547	655	630	737	891	721	703	182	189	207
Portsea Island .	53,036	1,264	1,180	1,140	1,211	1,152	1,342	297	320	344
Winchester . .	23,044	421	479	526	416	469	471	116	121	170
Windsor . . .	20,502	381	367	402	395	394	314	97	106	123
South Midland Division.										
St. Albans . .	17,051	378	310	331	300	340	291	83	85	109
Wycombe . .	34,150	788	692	824	751	679	748	187	205	238
Oxford . . .	19,701	359	407	406	450	414	359	102	112	108
Northampton .	28,103	689	687	670	693	622	677	168	189	211
Bedford . . .	31,767	676	678	743	714	604	762	171	199	237
Cambridge . .	24,453	563	547	639	659	465	597	144	156	230
Eastern Division.										
Colchester . .	17,790	533	437	488	381	417	393	113	119	136
Ipswich . . .	25,254	694	630	593	499	594	551	150	164	174
Norwich . . .	61,846	1,373	1,852	1,752	1,362	1,582	1,295	396	417	426
Yarmouth . .	24,031	417	440	504	493	516	510	118	123	196
South Western Division.										
Devizes . . .	22,130	426	10	81	429	449	633	115	135	148
Dorchester . .	23,380	469	362	412	456	437	524	107	124	168
Exeter . . .	31,333	700	646	808	920	764	836	192	219	262
St. Thomas . .	47,105	824	819	838	859	886	808	214	242	247
Plymouth . .	36,527	862	670	765	730	1,141	889	208	220	269
Redruth . . .	48,062	914	909	1,011	906	1,232	845	249	260	270
Penzance . .	50,100	762	848	976	1,016	1,128	996	236	246	238
Bath . . .	69,232	1,567	1,602	1,974	1,728	1,598	1,624	423	477	507
Western Division.										
Bristol . . .	64,298	1,842	1,675	2,330	1,895	1,771	1,742	476	549	464
Clifton . . .	66,233	1,328	1,150	1,739	1,519	1,510	1,256	362	404	425
Stroud . . .	38,920	952	693	760	728	706	808	192	239	241
Cheltenham .	40,221	869	726	855	890	1,078	824	221	250	228
Hereford . .	33,646	774	687	758	688	862	816	188	215	244
Shrewsbury . .	21,529	568	514	559	520	586	534	137	159	163
Worcester . .	27,130	805	717	638	614	637	641	171	189	214
Kidderminster .	29,408	591	523	670	582	621	597	149	194	242
Dudley . . .	86,028	1,767	1,891	2,022	2,296	2,332	1,729	515	588	549
Walsall . . .	34,274	619	749	913	832	927	706	202	236	197
Wolverhampton	80,722	1,556	1,909	2,217	2,153	2,319	1,783	508	593	542
Wolstanton . .	32,669	710	795	831	757	964	842	203	222	248
Birmingham .	138,187	3,359	3,639	3,767	3,673	3,579	3,340	901	980	1,118
Aston . . .	50,928	1,099	1,058	1,218	1,113	1,093	1,081	279	288	349
Coventry . .	31,023	684	724	616	905	290	838	191	196	234

* The deaths in the metropolis for the years 1840-1-2 have been derived from the weekly tables, the Returns for each year comprising 52 weeks, or 364 days. The last quarter in the metropolis ended March 30, 1844. The returns from other places are for the years ending December 31, and the quarter ending March 31.

† Wandsworth District is included in the return for the metropolis.

A Quarterly Table of the Mortality, &c.—continued.

DISTRICTS.	Population 1841.	Annual Deaths Registered. 1838	1839	1840	1841	1842	1843	1838–42 Quarterly Average* Of Five Years.	Of Five Winters.	Deaths in the Winter Quarter ending Mar. 31, 1844.
North Midland Division.										
Leicester . .	50,932	1,170	1,291	1,730	1,358	1,457	1,255	350	394	415
Lincoln. . .	36,110	620	731	817	800	720	786	184	197	242
Nottingham .	53,080	1,209	1,540	1,794	1,239	1,429	1,393	361	375	387
Basford. . .	59,634	1,045	1,200	1,549	1,163	1,245	1,216	310	337	328
Derby . . .	35,015	769	832	926	914	909	922	217	246	266
North Western Division.										
Stockport . .	85,672	2,410	2,591	2,574	2,048	2,073	2,203	585	656	483
Macclesfield .	56,018	1,315	1,528	1,745	1,419	1,403	1,551	370	431	398
Great Boughton (including Chester) . .	49,085	1,040	1,237	1,384	1,246	1,189	1,091	305	348	345
Liverpool . .	223,054	6,627	7,435	8,470	7,556	7,407	7,458	1,875	1,963	1,996
West Derby (adjoining Liverpool) .	88,652	1,625	1,746	2,206	2,202	2,405	2,312	509	508	576
Blackburn .	75,091	1,612	2,190	2,140	1,692	1,665	2,031	465	536	513
Preston. . .	77,189	1,726	1,812	2,637	2,026	2,050	1,938	513	591	506
Rochdale . .	60,577	1,477	1,673	1,868	1,417	1,476	1,531	396	453	480
Bury . . .	77,496	1,901	1,990	2,170	2,064	1,987	1,832	506	615	614
Bolton . . .	97,519	2,432	2,857	2,900	2,572	2,607	2,596	668	772	678
Wigan . . .	66,032	1,483	1,912	2,144	1,561	1,588	1,832	434	520	641
Prescott . .	43,739	916	1,056	1,155	997	1,075	920	260	306	259
Chorlton . .	93,736	2,140	2,418	2,399	2,431	2,427	2,529	591	608	622
Manchester .	192,408	6,706	6,774	6,589	5,821	6,151	6,263	1,597	1,764	1,541
Salford . . .	70,228	2,207	2,449	1,998	1,971	1,977	2,098	530	567	502
Ashton . . .	173,964	4,488	5,489	4,873	4,282	4,786	4,391	1,196	1,288	1,244
York Division.										
Sheffield . .	85,076	2,429	2,703	2,410	2,231	2,182	2,169	598	653	579
Huddersfield .	107,140	1,847	2,080	2,243	2,122	1,996	2,451	514	594	607
Halifax. . .	109,175	2,098	2,402	2,354	2,202	2,272	2,459	566	645	670
Bradford . .	132,164	3,093	3,251	3,176	3,041	3,323	3,344	794	858	949
Leeds . . .	168,667	4,289	4,388	4,488	4,360	4,615	4,329	1,107	1,155	1,088
Hull . . .	41,130	1,060	1,023	1,442	1,206	1,042	1,128	289	294	327
York . . .	47,779	876	1,217	1,209	1,039	1,133	1,048	274	296	272
Northern Division.										
Sunderland .	56,226	1,479	1,524	1,513	1,512	1,357	1,247	369	387	306
Gateshead .	38,747	881	968	1,016	989	909	984	238	248	216
Tynemouth .	55,625	1,112	1,285	1,243	1,340	1,327	1,229	315	334	332
Newcastle-on-Tyne. . .	71,850	1,829	2,117	1,957	2,104	1,726	1,922	487	501	436
Carlisle . .	36,084	855	739	901	925	840	762	213	252	271
Cockermouth .	35,676	784	718	696	674	597	690	173	215	184
Kendal . . .	34,694	729	825	821	601	714	666	184	201	222
Welsh Division.										
Abergavenny .	50,834	1,150	1,206	1,374	1,458	1,109	1,116	315	373	476
Pont-y-pool .	25,037	561	615	563	648	545	514	147	174	142
Merthyr Tydvil	52,864	1,516	1,246	1,566	1,423	1,110	1,183	343	422	569
Newtown . .	25,958	537	468	619	539	420	477	129	143	145
Wrexham . .	39,542	845	823	966	900	809	917	217	257	266
Holywell . .	40,787	897	791	864	800	738	815	204	240	253
Anglesey . .	38,105	645	589	632	597	624	575	154	177	201
Total exclusive of the Metropolis	4,663,808	109,321	116,505	124,664	114,664	115,834	113,869	29,049	32,085	32,570
Grand Total	6,578,912	162,867	162,605	171,694	160,733	161,948	163,201	40,992	45,351	46,041

* Wandsworth District is included in the return for the metropolis.

MORTALITY OF THE METROPOLIS.

A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, registered in the 13 *Weeks ending* 30*th March,* 1844.

CAUSES OF DEATH.	Quarterly Average of Deaths in the Five Winters of 1839-43.	Deaths in the Winter Quarter ending Mar. 30, 1844.
ALL CAUSES	12,600*	13,471
SPECIFIED CAUSES	12,550	13,403
I. Zymotic (or Epidemic, Endemic, and Contagious) Diseases	2,119	2,457
SPORADIC DISEASES.		
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat	1,491	1,282
III. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	2,034	2,177
IV. Diseases of the Lungs and of the other Organs of Respiration	4,101	4,644
V. Diseases of the Heart and Blood Vessels	286	416
VI. Diseases of the Stomach, Liver, and other Organs of Digestion	768	795
VII. Diseases of the Kidneys, &c.	67	93
VIII. Childbirth, Diseases of the Uterus, &c.	141	114
IX. Rheumatism, Diseases of the Bones, Joints, &c.	81	74
X. Diseases of the Skin, Cellular Tissue, &c.	18	23
XI. Old Age	1,110	1,018
XII. Violence, Privation, and Intemperance	333	310
I. Small Pox	263	252
Measles	239	334
Scarlatina	309	536
Hooping Cough	524	487
Croup	105	107
Thrush	45	45
Diarrhœa	64	79
Dysentery	20	29
Cholera	2	4
Influenza	49	66
Ague	5	5
Remittent Fever	6	6
Typhus	406	432
Erysipelas	72	61
Syphilis	8	12
Hydrophobia	·2	2
II. Inflammation	94	18
Hæmorrhage	38	30
Dropsy	483	392
Abscess	51	23
Mortification	65	49
Purpura	2	5
Scrofula	26	36
Cancer	94	141
Tumor	22	13
Gout	19	14
Atrophy	78	150
Debility	279	214
Malformations	11	23
Sudden Deaths	228	174
III. Cephalitis	140	160
Hydrocephalus	444	481
Apoplexy	256	301
Paralysis	228	281
Convulsions	739	702
Tetanus	8	8
Chorea	1	3
Epilepsy	62	57
Insanity	15	22
Delirium Tremens	18	19
Disease of Brain, &c.	124	143
IV. Laryngitis	7	9
Quinsey	18	17
Bronchitis	232	444
Pleurisy	23	24
Pneumonia	1,125	1,327
Hydrothorax	86	102
Asthma	555	555
Phthisis or Consumption	1,822	1,904
Disease of Lungs, &c	233	262
V. Pericarditis	11	24
Aneurism	8	9
Disease of Heart, &c.	266	383
VI. Teething	214	157
Gastritis / Enteritis	190	19 / 141
Peritonitis	14	30
Tabes Mesenterica	59	100
Worms	5	3
Ascites	7	21
Ulceration (of Intestines, &c.)	18	21
Hernia	27	34
Colic or Ileus	24	37
Intussusception	6	6
Stricture	8	6
Hæmatemesis	4	11
Disease of Stomach, &c.	49	66
Disease of Pancreas	·2	..
Hepatitis	14	16
Jaundice	26	28
Disease of Liver, &c.	102	97
Disease of Spleen	1	2
VII. Nephritis	6	3
Ischuria	2	1
Diabetes	6	8
Cystitis	4	6
Stone	5	6
Stricture	5	14
Disease of Kidneys, &c.	39	55
VIII. Childbirth	104	80
Paramenia	3	..
Ovarium Dropsy	5	7
Disease of Uterus, &c.	29	27
IX. Arthritis	·6	1
Rheumatism	36	31
Disease of Joints, &c.	45	42
X. Carbuncle	·4	3
Phlegmon	1	..
Ulcer	8	11
Fistula	5	6
Disease of Skin, &c.	4	3
XI. Old Age	1,110	1,018
XII. Intemperance	6	11
Privation	10	7
Violent Deaths	317	292
Causes not specified	50	68

* If corrected for the increase of population, this average would be 13,915.

PRICES OF PROVISIONS,

Average Contract Prices of the Provisions and Fuel supplied to the Workhouses

Districts marked out by the Registrar-General, and Central Unions contained therein.	Average Weekly Cost per Head of In-door Paupers. Food.	Clothing.	Food and Clothing.	Wheaten Flour per Stone.	Wheaten Bread per 4 lbs.	Meat—Beef and Mutton per lb.	Salt Butter per lb.	Cheese per lb.	Potatoes.
	s. d.	d.	s. d.	s. d.	d.	d.	d.	d.	s. d.
Metropolis.									
East London	2 9¼	0¾	2 10	2 0	6¼	4¼	6½	..	2 3 cwt.
Holborn	1 10¾	2¼	2 1	2 0	6	4	6¼	4	2 5 cwt.
South Eastern Counties.									
Maidstone	2 7½	10½	3 6	2 0	6	4¼	7	4½	2 0 cwt.
Portsea Island	2 2⅜	7⅜	2 9¾	2 0	6	3½	7¼	3¾	2 0 cwt.
South Midland Counties.									
Northampton	2 7½	7	3 2½	1 9	4½	4¼	8¼	6½	..
Cambridge	2 5¾	7	3 0¾	2 1	5¾	4	9	4½	..
Eastern Counties.									
Ipswich	2 2¼	7	2 9¼	1 9	4¾	5	10	5¾	..
South Western Counties.									
Devizes	1 10¾	3¾	2 2½	1 9	4¾	3	7½	4½	1 6 bshl.
Penzance	2 1	5	2 6	2 0	5¾	4	7¼	10	2 9 cwt.
Bath	1 11¾	2½	2 2¼	..	5¼	..	..	3	..
Western Counties.									
Stroud	1 10¼	1¾	2 0	1 8	5¼	4	7½	3½	5 0 bag.
Wolverhampton	2 5¾	5¼	2 11	2 0	5¼	3	9	4¾	4 6 bag.
North Midland Counties.									
Derby	1 9	3½	2 0½	2 0	5¾	4½	12	5½	2 6 cwt.
North Western Counties.									
Macclesfield	1 9	10½	2 7½	1 9	..	3¾	9½	6½	4 2 load
Bolton	1 5½	..	1 5½	1 9	5	3½	7½	6	5 0 load
Prescot	1 5½	5¼	1 10¾	..	4½	3¾	8	..	1 4 bshl.
North Eastern Counties.									
Sheffield	2 4	10¾	3 2¾	1 8½	..	5	..	6½	4 0½ load
Halifax	1 9	3½	2 0½	2 6	5	4¾	8½	7	7 0 load
Sculcoates	..	..	..	2 2½	4½	4¼	14	..	0 5 peck
Northern Counties.									
Gateshead	1 9	6	2 3	2 0	5¼	4	10	6½	2 10 cwt.
Kendal	1 7¼	4¼	1 11½	1 10	4½	3½	9	2½	0 3 st.
Wales.									
Pembroke	1 3¾	3½	1 7¼	2 0	6	4½	7¼	2½	2 6 st.
St. Asaph	1 9	3½	2 0½	1 9	6	3¾	9	5½	3 0 / 210lbs.

FUEL, &c.—(*Continued from p.* 91.)
of the following Unions, during the Quarter ended at Christmas 1843.

Peas per quart.	Oatmeal per lb.	Candles per 12 lbs.	Yellow Soap.	Coals per Ton.	Tea per lb.	Sugar per lb.	Milk per quart.	Miscellaneous Articles.
d.	*d.*	*s. d.*		*s. d.*	*s. d.*	*d.*	*d.*	
$2\frac{1}{2}$	2	5 1	40*s.* cwt.	16 0	3 5	6	$2\frac{1}{2}$	Table Beer 5*s.* barrel.
$2\frac{1}{2}$	$1\frac{3}{4}$	5 9	42*s.* cwt.	17 0	3 4	6	..	Porter 31*s.* barrel.
..	6	5 6	$4\frac{1}{2}$*d.* lb.	20 9	3 5	$6\frac{3}{4}$	$1\frac{1}{2}$	. . . .
$2\frac{3}{4}$	2	5 $2\frac{1}{2}$	43*s.* cwt.	16 2	..	..	..	Suet $4\frac{1}{2}$ lb.
..	$3\frac{1}{4}$	5 6	48*s.*6*d.*ct.	16 6	4 0	7	2	Rice 16*s.* per cwt., Barley, 19*s.* per cwt.
3	$1\frac{1}{2}$	5 6	44*s.*6*d.* ct.	22 6	3 6	6	..	Rice, $2\frac{1}{2}$*d.* lb. Salt, 3*s.*6*d.* cwt.
$2\frac{1}{4}$	$3\frac{3}{4}$	5 8	46*s.* cwt.	19 6	..	..	..	. . . .
$2\frac{1}{4}$	$3\frac{1}{2}$	6 0	5*d.* lb.	18 6	4 2	7	..	Bacon, 4*d.* lb.
3	$2\frac{3}{4}$	5 6	48*s.* cwt.	14 6	3 10	$6\frac{3}{4}$	..	Fish, 9*s.* 1*d.* cwt.
$2\frac{1}{4}$	$3\frac{3}{4}$	6 0	..	..	..	..	..	. . . .
2	..	6 3	39*s.* cwt.	14 0	..	..	..	Bacon, $4\frac{1}{2}$*d.* lb. Rice Flour, 18*s.* cwt. Groats, 19*s.* 6*d.* cwt.
2	2	5 0	$4\frac{1}{2}$*d.* lb.	6 6	3 8	$6\frac{1}{2}$	1	Suet, 4*d.* lb.
$2\frac{1}{4}$	3	5 6	44*s.* cwt.	9 6	4 0	7	..	Rice, 16*s.* cwt.
$2\frac{1}{2}$	$2\frac{1}{4}$	5 6	$4\frac{1}{2}$*d.* lb.	9 2	..	..	..	. . . .
$1\frac{3}{4}$	2	3 0	$4\frac{1}{2}$*d.* lb.	6 4	..	..	1	Treacle, 3*d.* lb.
2	2	5 0	41*s.* cwt.	6 6	..	..	1	Bacon, 4*d.* per lb.
$2\frac{1}{4}$	$1\frac{1}{2}$	5 3	$4\frac{1}{4}$*d.* lb.	6 6	4 $2\frac{1}{4}$	7	$1\frac{1}{2}$	Bacon, 2*d.* lb. Coffee, 1*s.* 6*d.* lb. Treacle, 3*s.* $4\frac{1}{2}$*d.* stone. Rice, 2*s.* 1*d.* st. Salt, 3*d.* st. Porter, $10\frac{3}{4}$*d.* gall. Tobacco, 3*s.*6*d.* lb.
2	$2\frac{1}{4}$	5 0	5*d.* lb.	8 3	3 10	7	$1\frac{3}{4}$	. . . .
$2\frac{1}{4}$	3	5 6	..	17 0	..	..	1	. . . .
2	3	5 6	53*s.* cwt.	4 0	4 4	$6\frac{1}{2}$	..	Coffee, 1*s.* 6*d.* per lb.
$2\frac{1}{4}$	$2\frac{1}{2}$	5 3	6*d.* lb.	9 4	4 2	..	$0\frac{1}{2}$	. . . .
7	$3\frac{1}{4}$	6 6	50*s.* cwt.	14 2	4 8	7	1	. . . .
$\frac{1}{4}$	$2\frac{1}{4}$	6 9	5*d.* lb.	11 8	4 0	7	$1\frac{1}{4}$	. . . .

REVENUE.

An Abstract of the Net Produce of the Revenue of Great Britain, in the Quarters and Years ended 5th April, 1843 *and* 1844; *showing the Increase or Decrease thereof.*—(*Continued from p.* 93.)

Sources of Revenue.	Quarters ended 5th April,			
	1843	1844	Increase.	Decrease.
Customs—	£.	£.	£.	£.
Consolidated Duties .	3,193,586	3,529,551	..	..
Sugar Duty applicable to Consolidated Fund .	262,546	420,796	..	..
Ditto Ditto to Supplies .	763,405	654,100	..	..
Total Customs . .	4,219,537	4,604,447	384,910	..
Excise	1,767,373	1,852,689	85,316	..
Stamps	1,593,126	1,639,011	45,885	..
Taxes	142,698	144,685	1,987	..
Property Tax	1,885,232	1,992,859	107,627	..
Post-Office	144,000	174,000	30,000	..
Crown Lands	35,000	65,000	30,000	..
Miscellaneous . . .	541,556	41,292	..	500,264
Total Ordinary Revenue .	10,328,522	10,513,983	685,725	500,264
Imprest and other Moneys	16,907	54,244	37,337	..
Repayments of Advances.	124,048	226,284	102,236	..
Total Income . .	10,469,477	10,794,511	825,298	500,264
Amount applied to Consolidated Fund, exclusive of Advances . .	9,760,269	7,635,972	500,264	Deduct Decrease.
Ditto applied as Advances	141,378	240,000		
Ditto as part of the Ways and Means of the Year.	567,830	2,918,539	325,034	Increase on the Quarter.
Total	10,469,477	10,794,511		

Sources of Revenue.	Years ended 5th April,			
	1843	1844	Increase.	Decrease.
	£.	£.	£.	£.
Customs	18,799,794	19,458,129	658,335	..
Excise	11,405,516	11,880,123	474,607	..
Stamps	6,484,739	6,472,040	..	12,699
Taxes	4,265,537	4,192,473	..	73,064
Property Tax	2,456,288	5,356,887	2,900,599	..
Post-Office	607,000	622,000	15,000	..
Crown Lands	117,500	147,500	30,000	..
Miscellaneous. . . .	797,774	1,134,477	336,703	..
Total Ordinary Revenue .	44,934,148	49,263,629	4,415,244	85,763
Imprest and other Moneys	502,604	205,865	..	296,739
Repayments of Advances.	642,058	927,483	285,425	..
Total Income . . .	46,078,810	50,396,977	4,700,669	382,502
Amount applied to the Consolidated Fund, exclusive of Advances .	32,648,659	32,462,007	382,502	Deduct Decrease.
Ditto applied as Advances	545,627	863,002		
Ditto as part of the Ways and Means of the Year.	12,884,524	17,071,968	4,318,167	Increase on the Year.
Total	46,078,810	50,396,977		

QUARTERLY METEOROLOGICAL TABLE,

Compiled from the Weekly Tables furnished to the Registrar-General by the Astronomer Royal.

1844 Week ending	Phases of the Moon.	Mean height of the Barometer, from 72 observations, corrected and reduced to 32 deg. Fahrenheit.	THERMOMETERS. Highest during the week.	Lowest during the week.	Mean. Highest on each day, 6 observations.	Lowest on each day, 6 observations.	Difference.	Mean of 72 observations.	Dew Point. Mean of 72 results.	Self-Registering. Highest in the sun. During the week.	Highest in the sun. Mean of 7 observations.	Lowest on the grass. During the week.	Lowest on the grass. Mean of 7 observations.	Difference between the dew point temperature and air temperature. Mean of 72 differences.	Mean of the greatest on each day, 6 observations.	Mean of the least on each day, 6 observations.	Difference between the mean temperature of the week and the mean temperature of the same week on an average of 25 years.	WIND. Pressure in lbs. on the square foot. General direction.	Greatest pressure in the week.	Mean for the week.	The amount of Horizontal movement of the air in each week.	Mean amount of Cloud, 0-10.	Rain in inches (7 days.)
																					miles.		
January 6th	5th, full	29·479	52·0	19·6	45·2	33·7	11·5	40·1	37·9	53·6	46·5	6·3	26·2	2·2	5·8	0·2	+4·5	S.W.	8·0	0·4	1645	7·0	1·24
,, 13th	12th, 3rd qr.	30·068	43·0	32·0	41·5	35·1	6·4	38·8	36·6	51·0	45·7	24·2	29·5	2·1	4·4	0·5	+3·1	W.S.W. and N.N.W.	1·5	0·07	930	8·6	1·06
,, 20th	19th, new	30·059	46·5	26·3	40·3	33·2	7·1	37·0	33·3	49·0	43·6	15·2	24·9	3·8	6·8	1·0	+2·1	N. & W.	3·5	0·3	865	7·5	,,
,, 27th	27th, 1st qr.	30·042	47·4	30·2	43·2	34·2	9·0	39·2	36·3	52·8	47·9	21·2	23·4	3·0	5·7	0·3	+1·7	S.W.	1·5	0·1	610	7·5	,,
February 3rd	31st, Greatest declination N.	29·706	50·1	27·5	40·5	33·0	7·5	36·9	32·5	61·4	49·2	18·6	25·6	4·5	8·0	1·3	—0·2	W.N.W.	12·0	1·2	1345	6·7	0·40
,, 10th	6th, In equator	29·269	43·0	25·8	39·4	30·7	8·7	34·6	32·2	50·0	49·6	17·2	24·3	2·4	6·2	0·1	—4·6	W.S.W. and N.W.	4·5	0·2	970	6·0	0·60
,, 17th	11th, 3rd qr.	29·051	47·0	21·2	40·1	26·7	11·4	34·7	32·1	50·0	46·3	14·0	23·1	2·6	6·6	0·7	—4·1	N.W. & S.W.	1·0	0·1	750	8·1	0·02
,, 24th	18th, new	29·363	48·3	23·5	41·7	29·1	12·6	35·5	31·6	57·2	47·7	12·0	24·4	3·9	9·4	0·6	—4·0	Variable	12·0	0·5	1460	7·0	0·73
March 2nd	26th, 1st qr.	29·237	51·1	29·0	45·9	34·6	11·3	40·3	35·6	69·0	60·7	22·1	29·3	4·7	16·7	1·4	—0·0	W.	10·0	1·2	1960	7·2	0·69
,, 9th	4th, full	29·798	55·6	24·3	42·8	31·9	10·9	37·3	32·7	60·7	58·4	15·2	26·4	4·7	9·6	1·2	—3·5	N.	9·0	0·9	1440	6·9	1·25
,, 16th	11th, 3rd qr.	29·544	52·5	32·6	46·5	35·9	10·6	41·1	36·7	67·0	57·2	24·0	29·9	4·4	9·2	0·5	—1·1	N.W.	17·0	1·7	1660	7·3	0·97
,, 23rd	19th, new	29·704	49·4	29·0	46·5	33·0	13·5	39·7	33·7	62·2	56·3	16·5	27·1	6·0	10·7	1·6	—2·8	N.W. & S.W.	8·0	1·0	1385	7·6	0·13
,, 30th	26th, full	29·948	57·6	33·7	54·6	40·8	13·6	47·2	42·5	83·6	70·1	26·2	33·4	4·8	10·3	0·8	+4·6	S.W.	7·0	0·5	1160	6·4	0·04
Mean, Highest, or Lowest, of the 13 weeks.	..	29·705	57·6	10·6	43·7	33·4	10·4	39·6	34·9	83·6	52·3	6·3	27·1	3·8	7·9	0·3	— ·3	..	17·0	0·69	1238	7·2	7·13

DEATHS registered in the Metropolis from Small Pox, Measles, Scarlatina, Hooping Cough, Typhus, Diarrhœa, Dysentery and Cholera, Influenza, Consumption, and other diseases of the Lungs; the numbers at each age,* and the total deaths† (except violent and sudden) in each of the 13 weeks ending March 30, 1844.

Week ending	Small Pox.	Measles.	Scarlatina.	Hooping Cough.	Typhus.	Diarrhœa, Dysentery, and Cholera.	Influenza.	Phthisis or Consumption.	Other diseases of the lungs.	Deaths at Three Ages, (exclusive of violent and sudden Deaths.) 0 to 15.	15 to 60.	60 and upwards.	Deaths from all causes, (exclusive of violent and sudden deaths.)
January 6th	16	25	47	28	23	10	8	111	174	440	259	190	903
,, 13th	20	23	51	32	34	6	3	139	193	431	267	193	911
,, 20th	21	26	40	26	35	12	3	131	217	450	334	229	1013
,, 27th	10	22	42	28	32	8	4	132	214	432	322	235	991
February 3rd	19	28	31	37	36	6	1	162	229	444	350	246	1052
,, 10th	17	30	37	44	30	7	5	160	249	452	350	243	1045
,, 17th	29	28	43	37	40	10	9	170	278	465	361	262	1108
,, 24th	19	18	43	33	42	8	4	165	263	410	392	263	1067
March 2nd	17	29	39	52	41	13	6	156	210	450	336	239	1024
,, 9th	16	32	40	43	31	6	7	150	225	443	326	239	1008
,, 16th	21	21	43	32	26	6	3	133	174	398	336	229	957
,, 23rd	22	27	36	51	19	7	4	147	162	427	304	209	943
,, 30th	18	25	35	44	39	13	9	142	152	435	310	205	953

* The Ages of 39, on account of the corrections for returns not received, were not specified in the Table.
† Inquests are held on violent and sudden deaths which are returned irregularly.

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign and Colonial Wheat, during each week of the First Quarter of 1844; *together with the Average Prices for the whole Quarter, ended at Lady Day.—(Continued from p.* 94.)

Returns received at the Corn Office, 1843.	Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.	Date of Certificates of preceding Prices, regulating Duties for the Week ensuing.	Duties on Wheat per Quarter.	
	Weekly Average.	Aggregate Average of Six Weeks, regulating Duty.	Weekly Average.	Weekly Average.	Weekly Average.	Weekly Average	Weekly Average.		From Foreign Countries.	From British Possessions out of Europe.
Weeks ended 1844	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		s. d.	s. d.
Jan. 6 .	49 11	50 5	32 7	18 4	30 8	29 6	30 7	Jan. 11	20 0	5 0*
13 .	50 9	50 5	33 0	18 10	33 6	29 9	31 0	18	20 0	5 0
20 .	51 9	50 6	33 7	18 9	31 8	29 6	30 4	25	20 0	5 0
27 .	52 3	50 9	33 8	19 0	32 0	29 7	30 11			
								Feb. 1	20 0	5 0
Feb. 3 .	52 6	51 2	33 3	19 0	33 10	29 9	30 9	8	19 0	5 0
10 .	52 7	51 7	33 1	19 2	32 9	29 10	30 9	15	19 0	5 0
17 .	53 7	52 2	33 5	19 7	33 5	30 7	31 2	22	18 0	5 0
24 .	55 1	52 11	33 8	19 7	32 10	30 5	31 2	29	18 0	5 0
								Mar. 7	18 0	5 0
Mar. 2 .	56 3	53 8	33 9	20 0	35 3	30 5	31 1	14	18 0	5 0
9 .	56 0	54 4	33 6	20 0	33 10	31 1	31 7	21	18 0	5 0
16 .	56 3	54 11	33 4	20 2	33 9	31 4	31 5	28	17 0	4 0
23 .	56 6	55 7	33 2	20 1	34 1	31 2	31 0			
30 .	56 5	56 1	32 7	19 10	33 3	31 3	31 1	April 4	16 0	3 0
Average of the Quarter	53 9	..	33 2	19 4	33 1	30 3	30 11	..	..	..

* By Act 6 & 7 Vict. c. 29, Wheat and Wheat Meal or Flour, the produce of Canada, and imported thence since the 10th October, 1843, are admitted at a fixed duty; the former at 1s. per quarter, the latter at 4½d. per cwt.

Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ended 5th January, 5th February, 5th March, and 5th April, 1844; *the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in bond at the close of them.—(Continued from p.* 94.)

WHEAT.

Months ended	Imported.			Paid Duty.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1844	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.
5th January .	26,107	8,659	34,766	1,132	7,815	8,947	181,709	1,270	182,979
5th February .	34,066	1,354	35,420	919	2,628	3,546	219,116	734	219,850
5th March . .	16,074	..	16,074	1,673	308	1,981	229,739	116	229,855
5th April . .	39,601	..	39,601	3,075	..	3,075	258,736	117	258,853

WHEAT FLOUR.

Months ended	Imported.			Paid Duty.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1844	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
5th January .	13,625	109,370	122,995	73	106,489	106,562	87,375	4,906	92,282
5th February .	1,695	17,201	18,896	42	18,537	18,579	87,277	3,859	91,137
5th March. .	26,259	4,892	31,152	171	2,433	2,604	111,577	6,317	117,895
5th April . .	12,879	1,714	14,593	566	349	915	121,317	8,047	129,364

CURRENCY.

Quarterly Average of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 27th January, 24th February, and 23rd March, 1844; *and in the corresponding Quarters of the preceding Year.* —(*Continued from p.* 95.)

Quarters ended	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
1844.	£.	£.	£.	£.	£.	£.
27th Jan. .	19,611,000	13,172,000	32,783,000	21,937,000	13,933,000	35,870,000
24th Feb. .	20,414,000	13,924,000	34,338,000	22,482,000	14,993,000	37,475,000
23rd March .	21,122,000	13,972,000	35,094,000	22,479,000	15,784,000	38,263,000
1843.						
28th Jan. .	19,342,000	10,417,000	29,759,000	21,672,000	10,705,000	32,377,000
25th Feb. .	19,739,000	11,205,000	30,944,000	22,695,000	10,945,000	33,640,000
25th March .	20,093,000	12,003,000	32,096,000	23,830,000	11,054,000	34,844,000

Average Aggregate Amount of Promissory Notes which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks, by which issued in each part of the Kingdom, with the Average Amount of Bullion in the Bank of England, during the four weeks ended the 3rd February, 2nd March, and 30th March, 1844, *respectively.*—(*Continued from p.* 95.)

Banks.	Circulation during the Four Weeks ended		
	3rd Feb. 1844.	2nd March. 1844.	30th March. 1844.
	£.	£.	£.
England—Bank of England .	21,828,000	21,471,000	20,842,000
Private Banks. .	4,980,138	4,992,709	4,983,646
Joint-Stock Banks.	3,446,433	3,427,189	3,502,363
Scotland—Chartered Private & Joint-Stock Banks	2,791,403	2,684,191	2,610,712
Ireland—Bank of Ireland. .	3,581,000	3,609,000	3,573,100
Private and Joint-Stock Banks . .	2,429,565	2,428,498	2,424,072
Total . .	39,056,539	38,612,587	37,935,893
Bullion in the Bank of England	15,480,000	16,011,000	16,322,000

Consolidated Fund Operations.—The total income brought to this account in the quarter ended 5th April, 1844, was 10,155,308*l.*; the total charge was 5,941,229*l.*, leaving a surplus of 4,214,079*l.* The amount of Exchequer Bills issued to meet the charge on the Consolidated Fund for the quarter ended 5th January, 1844, and paid off out of the growing produce of that fund for the quarter ended April 5th, 1844, after deducting 200,000*l.* paid off out of the Sinking Fund, was 5,262,858*l.* The surplus of the Consolidated Fund for the quarter ended April 5th, 1844, was 1,295,540*l.*; and the probable amount of Exchequer Bills required to meet the charge on the Consolidated Fund for the quarter ended April 5th, 1844, was 3,967,318*l.*

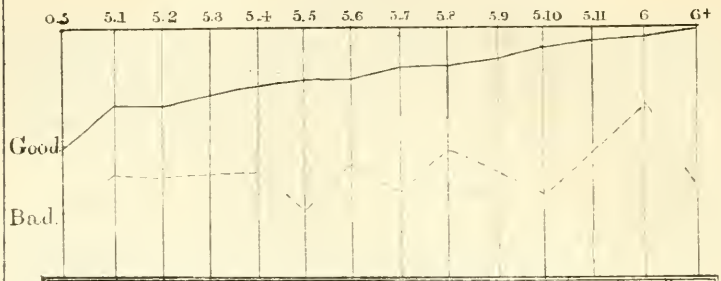
BANKRUPTCY.

An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ended March 31, 1844; *showing the Counties and Branches of Industry in which they have occurred.* (*Continued from p.* 96.)

COUNTIES.	January.	February.	March.
Metropolis	23	27	28
Bedford	..	1	..
Berks	..	1	2
Bucks	..	..	..
Cambridge	..	..	..
Chester	..	1	1
Cornwall	..	1	..
Cumberland	..	..	2
Derby	..	..	1
Devon	..	2	..
Dorset	..	..	..
Durham	1	3	2
Essex	5	1	2
Gloucester	2	..	1
Hants	4	2	4
Hereford	..	..	..
Hertford	1	2	1
Huntingdon	..	..	..
Kent	1	1	2
Lancaster	8	7	15
Leicester	1	..	..
Lincoln	..	1	..
Middlesex (exclusive of the Metropolis)	2	1	..
Monmouth	..	..	..
Norfolk	1	..	1
Northampton	3	..	1
Northumberland	4	4	4
Nottingham	2	2	2
Oxford	1	1	1
Rutland	..	..	..
Salop	1	..	2
Somerset (including Bristol)	2	3	2
Stafford	3	3	2
Suffolk	..	2	1
Surrey (exclusive of the Metropolis)	1	..	1
Sussex	..	..	2
Warwick	1	6	4
Westmoreland	..	..	..
Wilts	..	1	..
Worcester	1	1	1
York (East Riding)	..	..	1
,, (North Riding)	..	1	..
,, (West Riding)	2	5	6
Wales	4	1	4
Total	75	81	96

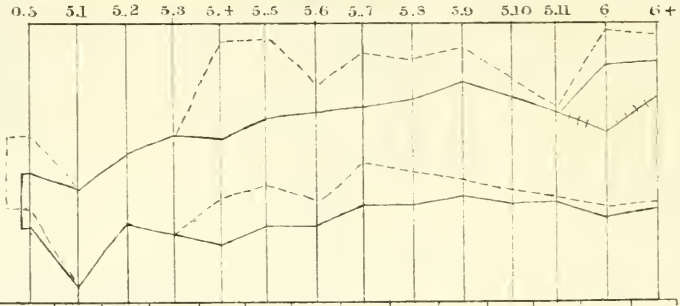
TRADES.	January.	February.	March.
Agriculture and connected Trades.			
Farmers	..	..	..
Agricultural Implement Makers and Wheelwrights	..	..	..
Corn Factors	..	..	..
Millers and Malsters	3	4	1
Hop Merchants	..	..	..
Brewers	..	..	1
Horse and Cattle Dealers, and Woolstaplers	..	..	1
Mining and connected Trades.			
Mining Firms	..	..	..
Blasting Works	..	..	..
Manufactures.			
Woollen Manufactures	1	2	2
Cotton ,,	2	..	1
Linen ,,	1	1	..
Silk ,,	..	..	1
Printers and Dyers	..	..	..
Lace Manufacturers	..	..	..
Hosiery ,,	1	..	..
Hardware ,,	1	..	1
Earthenware ,,	..	..	..
Glass ,,	..	..	..
Paper ,,	..	..	2
Builders	2	2	3
Miscellaneous Manufactures	8	5	13
Commerce.			
Bankers and Merchants	2	3	5
Shipowners, Warehousemen, Brokers, and Wholesale Dealers generally	13	11	15
Retail and Handicraft Trades.			
Bakers	1	2	..
Butchers	..	3	1
Corn and Hay Dealers	1	..	1
Innkeepers and Victuallers	7	6	8
Dealers in Grocery, Drugs, and Spices	2	5	6
Makers of, and Dealers in, Clothing	8	5	9
Makers of, and Dealers in, Furniture	3	2	4
Coach Builders	..	..	..
Miscellaneous	19	30	21
Total	75	81	96

Diag. 1.



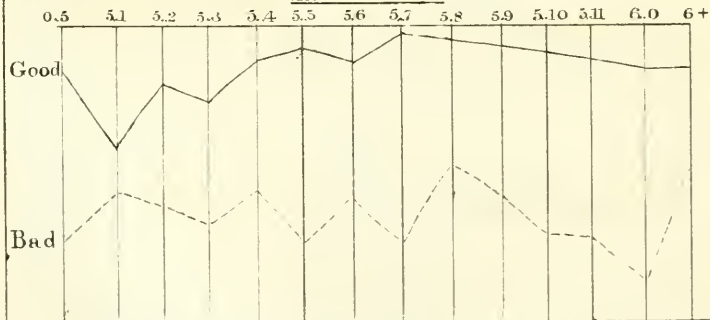
	135	177	173	184	193	208	204	224	220	229	246	254	255	260
Cases	14	6	27	22	68	78	118	102	172	164	98	75	82	62

Diag. 2.



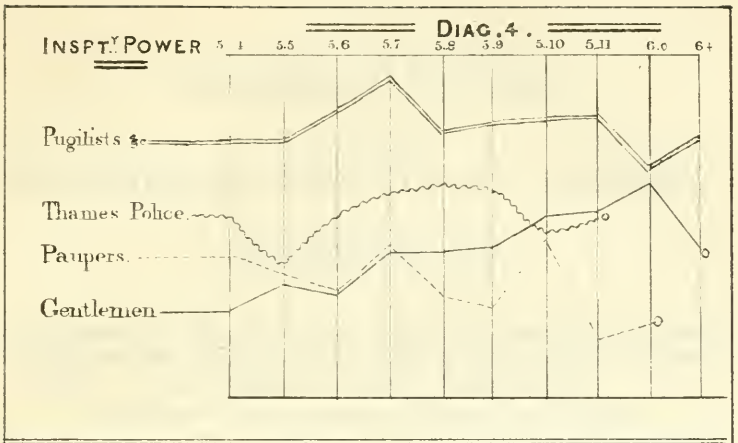
E	3.28	3.36	3.23	3.15	4.32	4.33	3.87	4.18	4.13	4.28	3.94	3.63	4.48	4.41
I	2..55	2..0	2.52	2.31	2.70	2.84	2.70	3.07	2.96	2.91	2.83	2.77	2.65	2.67

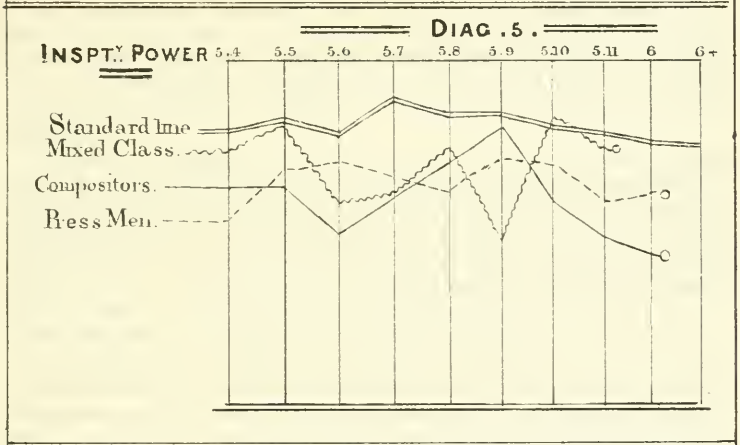
Diag. 3.

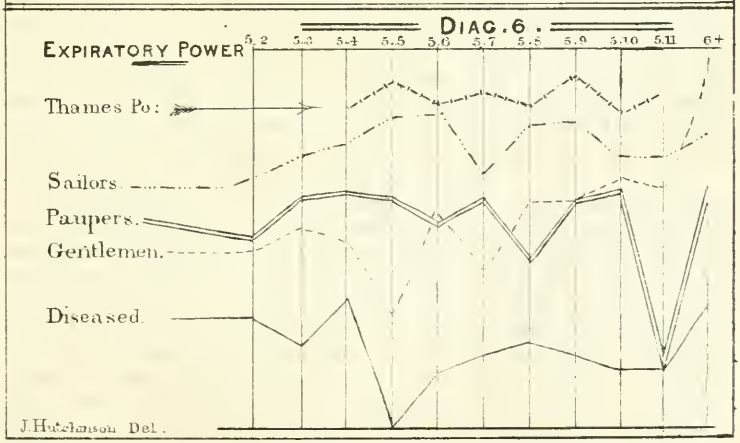


G	2.55	2.00	2.52	2..31	2.70	2.84	2.70	3.07	2.96	2.91	2.83	2.77	2.65	2.67
B	.82	1.30	1.16	1.0	1.34	.74	1.25	..79	1.67	1.32	..93	..88	.40	1.65

J. Arrets Litho 59 Greek St Soho Square


DIAG. 4.
INSPT.Y POWER
5.4
5.5
5.6
5.7
5.8
5.9
5.10
5.11
6.0
6+
Pugilists
Thames Police.
Paupers.
Gentlemen


DIAG. 5.
INSPT.Y POWER
5.4
5.5
5.6
5.7
5.8
5.9
5.10
5.11
6
6+
Standard line
Mixed Class.
Compositors.
Press Men.


DIAG. 6.
EXPIRATORY POWER
5.2
5.3
5.4
5.5
5.6
5.7
5.8
5.9
5.10
5.11
6+
Thames Po:
Sailors.
Paupers.
Gentlemen.
Diseased.
J. Hutchinson Del.

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

SEPTEMBER, 1844.

Contributions to Vital Statistics, obtained by means of a Pneumatic Apparatus for valuing the Respiratory Powers with relation to Health. By John Hutchinson, Esq., Surgeon, F.S.S.

[*Read before the Statistical Society of London, June 17th*, 1844.]

If in the present day there is one subject pre-eminently engaging the public mind, it appears to be, the best means of preserving the public health. And if any one among the various divisions of that subject can be ranked before another on the score of utility, it should seem to be, that regarding the effects produced on individual health by particular occupations.

The earliest original contribution to this branch of knowledge which has come under my notice, is that by Ramazzini, of Padua, published in English in 1705, and which much redounds to the credit of the author. The only other book of which I am aware, is that written in the present time by our countryman Thackrah, whose labour in this cause has far surpassed that of all others. Many journals have bestowed praise on this author, but it appears to me they have all come short of the commendation which is due to his industry and accuracy.

It is generally the custom to estimate the healthiness of a trade by the mortality among the individuals employed in it; but, however correct this system may be, it is an expensive method of coming to the conclusion; since, in this way, we do not count the effect of a certain trade upon health until so many per cent. *have* fallen victims to it. Deducting from these a given number of cases as uncertain, this *fatal* list is still of little value until compared with other fatal lists. The object of the present paper is to make known some researches, the result of which induces me to venture a new method of determining the effect of trades upon health, by ascertaining the *presence* of disease, and the extent of deterioration in the health of a living individual.

The pathologist, in the present day, not only weighs and measures the dead subject as a whole, but carefully weighs every internal organ, and often ascertains the cubic measurement of the heart also, that he may inform himself as to the seat of disease. Here we see that *measurement* is made one of his guides in thus inquiring into the seat of disease; for after he has determined by numerous observations the natural weight or dimensions of an organ, he justly concludes that all similar organs, if differing from this standard, differ so on account of disease. Such is the grand harmony of our structure, that proportion and symmetry are as much displayed amidst the internal organs as in the external form.

And again, the physician, when inquiring into the state of his patient,

desires to know whether the natural secreting organs are acting in excess or in deficiency, and upon this he grounds his opinion as to the healthiness of the particular organs. Every organ, then, has its appropriate action, which cannot be altered to any material amount without the presence of disease; and surely this argument applies with some force to an organ whose action is of such vital importance that its suspension for a very brief period terminates our life. I mean, the "*respiratory functions*," the investigation of the different states of which in various conditions of life forms the subject of the present paper.

With the instruments I have constructed, and which are now before the Society, I have measured the *volume* of air that a man can force out of his chest, together with his *power* of inspiration and expiration; these observations I have connected with the state of his health, because I find this to vary according to his volume and power of expiration and inspiration.

Simple as this method appears to be, it is extraordinary that up to this time very few have been the physical experiments made upon the lungs, so as to determine with any accuracy even their absolute capacity; and we are perfectly ignorant as to how much air is necessary for our well-being; nevertheless, this knowledge is perfectly accessible, and the present observations will assist in forming that chain of inquiry.

Physiologists generally divide respiration into three or four different stages, and these again will admit of numerous subdivisions.

My object has been, first of all, to determine *what quantity of air we are able to expel from the lungs by the greatest voluntary effort* we are capable of exercising. Owing to the various terms used to designate the different divisions of respiration, I have found it difficult to separate this division from the chaos of physical experiments hitherto made upon the lungs. And what I have gathered from them is of little value, not being connected with any other observations upon the human frame. Another object of my inquiry has been, to determine the *power* of the *inspiratory* and *expiratory* muscles; so that observations upon the *volume* of the lungs, and the *power* of these two classes of muscles, form the foundation of the present research, combined with certain external measurements.

I may here mention that, for brevity's sake, I have used the term "*capacity*" to signify that quantity of air which an individual can force out of his chest by the greatest voluntary expiration, after the greatest voluntary inspiration.

With these introductory remarks, I now proceed to the matter of this paper.

One thousand one hundred and fifty-one individuals, of different occupations, have been carefully examined; and, by Table C, now suspended before the Society, the various classes, also the numbers composing those classes, are thus arranged:—

TABLE C.

Sailors	121	Pressmen	30
Fire Brigade	82	Compositors	43
Police, Metropolitan	144	Draymen	20
Police, Thames	76	Gentlemen	98
Paupers	129	Diseased cases	60
Mixed Class (Artisans)	162	Miscellaneous cases	13
First Battalion Grenadier Guards	87		
Royal Horse Guards (Blue)	59	Total	1,151
Pugilists, &c.	24		
Anomalous cases	3		

I must here pause a moment to express my thanks to certain gentlemen, who with the greatest liberality and politeness have rendered me every assistance in their power to obtain these cases, and any other facility I might require towards my object: viz., Mr. Farr; Dr. Balfour; Surgeon-Major Johnston, and Assistant Surgeon Mr. Hurthwaite, of the first battalion Grenadier Guards; Mr. Gulliver, of the Royal Horse Guards; Mr. Fisher, for the police force; Dr. Boyd, for the paupers in the Mary-le-bone infirmary; Captain Bazalgette, for the sailors; Mr. Braidwood, who twice summoned his whole brigade force for my examination; Mr. Taylor, for the printers; Dr. Taylor and Dr. Williams for the diseased cases; also to Mr. Tibson; and last, though not least, for the liberal assistance of Mr. Brent, whose acquaintance with the physical proportions of man I believe to surpass that of all other men in Europe.

Each of these 1151 individuals was submitted to the observations given in Table B, here suspended, viz.:—

Number of cubic inches given by a full expiration.
Power of inspiration.
Power of expiration.
Height.
Circumference of the chest over the nipples.
} Height.
Weight.
Pulse.
Number of respirations per minute.
Age.
Temperature of the air expired into the receiver.

The detailed accounts of these observations upon this multitude are given in full in the MS. table, where it will be seen that upwards of 10,000 facts have been gathered together.

Each individual breathed three times into the machine, because, either from timidity or inexperience, the first observation was frequently not a correct experiment, but by three observations it is possible to ascertain the point exactly. But if more observations than three be made at the same time, the number of cubic inches of air will, from fatigue, be found to decrease. Moreover, so constant is the quantity of air in the lungs, that I have frequently examined men 18 months or two years afterwards, and have never found a variation exceeding two cubic inches: and although I have blown into this instrument not less than 2000 times, I cannot exceed 247 cubic inches at 60°. The operator in a little time becomes so well acquainted with the process of taking an observation, that he can readily tell when the individual under examination has done his utmost, and also determine the correctness of the experiment. The time required to pass a person through the whole of these observations, is three minutes.

A minute description of the mechanical construction of the two principal instruments, I have already read before the Society of Arts (29th May); therefore I will not detain the present meeting upon this branch of the subject; different sections of the instruments are represented by diagrams here exhibited, and may be referred to if required. Yet I may briefly state that the three observations, viz., those of the capacity, power of inspiration, and power of expiration, are determined by two instru-

ments;—the *capacity* by the large brass machine, now before the Society; the *power* of the two classes of muscles by the other instrument on the right. The breathing machine is principally constructed as an ordinary gasometer, one vessel inverted within the other; the outer cylinder contains water, the inner receives the breath, by which it is elevated, assisted by counterbalance weights. This receiver is graduated into cubic inches; therefore to whatever height the receiver is raised by the breath, the cubic inches are determined. Fig. 1* is a front section of this instrument with the receiver partly elevated. Fig. 2 is a ground plan of the same. Figures 4 and 5 are lateral sections of the same. The instrument for valuing the respiratory power is represented by Fig. 6; the resistance is a column of mercury in a tube which, upon being elevated or depressed, moves the index on the dial, which is divided into inches and tenths, with certain words differing in meaning, fixed opposite certain figures, their position having been determined by 1200 experiments. The words and figures are given on Table A; on the left side are the figures for *inspiratory* power; on the right those for *expiratory* power.

Power of Inspiratory Muscles. Inches.		Power of Expiratory Muscles. Inches.
1·5	Weak	2·0
2·0	Ordinary	2·5
2·5	Strong	3·5
3·5	Very Strong	4·5
4·5	Remarkable	5·8
5·5	Very Remarkable	7·0
6·0	Extraordinary	8·5
7·0	Very Extraordinary	10·0

It will be observed that the power of expiration is nearly one third *stronger* than that of inspiration. This power is taken by the nostrils; I first used the mouth; but the tongue and cheeks possessing a strength six or seven times greater than that of the true inspiratory muscles, and the difficulty of separating these two powers, compelled me to make all the experiments by the nostrils.

The *order* of taking the observations enumerated on Table B was as follows. The hand of the person to be examined was placed over the abdomen, in the sitting posture; the pulse was numbered, and also the respirations per minute; this twofold operation was kept secret from the individual, or the number of his respirations would have been modified. I next took his height, weight, and circumference of his chest; then three forced and full expirations were made into the spirometer; and, lastly, his power of inspiration and of expiration was tested. I cannot here give time to explain how errors may be detected; they sometimes arise from simple mistake; sometimes from an intention to deceive; but with a little skill on the part of the operator, *no* deception can be successfully practised. When the two experiments, upon the inspiratory and expiratory muscles, are properly made, there is a peculiar look in the eyes and over the whole countenance. There is not the least danger to be apprehended in this operation. I have found nothing injurious occur, out of 1200 persons submitted to this test, including the diseased cases.

The whole matter of the present research may be divided into the

* All the "*Figures*" thus referred to, are coloured diagrams exhibited before the Society, but not here introduced.

consideration, first of the healthy cases, and secondly of the diseased cases.

It will be self-evident that until a healthy standard be determined, I have no means of detecting by measurement the inroads made upon the organs by disease: therefore I have collected as many classes of men as possible, and submitted them carefully to the test of these instruments; and I believe that I have made experiments enough to point out what is the *healthy standard*, and hence to deduce what may be considered as an indication of disease.

My first object was, to discover whether any relation existed between this capacity of the lungs, inspiratory and expiratory power, and any other external and physical sign; therefore I submitted the whole number of subjects to all the observations enumerated in Table B (page 195), and to my gratification I *did discover* a relation *intimately existing* between this capacity and power, and the *height* of the individual, as I have indicated by the bracket on that table. I shall demonstrate most clearly to this Society, that so uniform is this relation, that if I be allowed to take a man's height, I can tell what the capacity of his lungs, and his inspiratory and expiratory powers, should be, to constitute him a healthy individual.

Therefore, as height can with ease be definitely determined, and is less changeable than any other of the physical observations taken, we have at *all* times a simple method of ascertaining the presence of disease, first in the chest, and secondly in the head and abdomen, or trunk, of the body.

These two tables, C and B, admit of numerous interesting calculations, many of which have been gone through, and remarks will be made upon them as may be required.

The first *grand point* I wish *especially* to draw attention to, is the capacity of the lungs of what may be considered healthy individuals. Let us turn to Diag. 1, where I have drawn fourteen perpendicular lines, which are to indicate different heights: the first line on the left is to indicate all heights up to and including 5 feet: the second line includes all FROM 5 feet to and including 5 feet 1 inch; the next, FROM 5 feet 1 inch to and including 5 feet 2 inches; and so on, increasing inch by inch, up to 6 feet; all above 6 feet come under 6 feet +. The horizontal line or curve indicates the capacity or quantity of air that 1088 individuals manifested by this "breath-meter," the difference of quantity being denoted by the elevation or depression of this curve, as it passes over the perpendicular lines. The number of cases examined under each height is given in the bottom row of figures, a point most necessary to be acquainted with, as that stamps the value of the curve as it passes over the lines for indicating heights. The row of figures above this, are the number of cubic inches obtained from the mean of so many cases as are marked in the bottom row of figures: thus, under the height 5 feet 8 inches, 172 persons have blown, and the *mean* of these men will be seen as 220 cubic inches: 32 of these men out of 172 were below 200 cubic inches, the rest above; so that I expect every man between 5 feet 7 inches and 5 feet 8 inches, if healthy, to blow out of his lungs *about* 220 cubic inches of air at 60°; but if he cannot throw out of his lungs *more* than 185 cubic inches, I should most decidedly suspect disease to be present; and again, if a 6 foot man,

whose capacity is marked as 255 cubic inches, could only blow 200 or 220, the healthy mark for the 5 foot 8 man, I should in like manner suspect disease. The exceptions to be made, are for *very stout* and *corpulent* individuals, whose capacity I find to stand the lowest. Very fat men of any stature, therefore, may blow 40 or 50 cubic inches less than the mean, and yet not be diseased in the chest. It simply requires more observations upon the corpulent than I have had an opportunity of making, to determine their capacity. So beautifully regular is the increasing capacity with the height, that the curve on Diag. 1 is nearly a perfect ascending line; and I have no doubt that if I had examined twice the number, the line would have been elevated in a perfect arithmetical progression. In confirmation of this, I will call the attention of the Society to the following table, *singularly gratifying* to me, and which I feel fully to reward my labour in working out this subject.

The three columns of figures exhibit the relation between height and "*capacity.*" The first column contains the various heights between 5 feet and 6 feet; the second column, the series of cubic inches derived from observation under each height; and the third column, the series of cubic inches in arithmetical progression: thus—

Heights.				Series derived from Observation.	Series in Arithmetical Progression.
		Mean.			
Ft.	In.	Ft.	In.	Cubic Inches.	Cubic Inches.
5	0	5	1	175·0	174·
5	2				
5	2	5	3	188·5	190·
5	4				
5	4	5	5	206·	206·
5	6				
5	6	5	7	222·	222·
5	8				
5	8	5	9	237·5	238·
5	10				
5	10	5	11	254·5	254·
6	0				

Hence I deduce a rule, viz. that "FOR EVERY INCH OF HEIGHT (FROM 5 FEET TO 6) 8 ADDITIONAL CUBIC INCHES OF AIR AT 60° ARE GIVEN OUT BY A FORCED EXPIRATION." Here at once is a guide for the operator, and a rule given that will enable us to compare men of different stature and different trades one with another, which may be done by referring to a table (I., page 207), where the mean capacity from whence I deduced this rule will be seen, and any comparison among thirteen classes of men may be made. In the preceding table, the similarity is remarkable between the second and third columns: if we mark out the unit figures in each, the numbers become, with one exception only, quite the same; and where this exception occurs, viz. at 5 feet 3 inches, 188·5 instead of 190, the number of persons here examined are so few compared with the numbers examined under the heights following, that this may account for the trifling difference here apparent.

The mechanical act of respiration depends essentially upon increasing the cavity of the thorax; this is accomplished principally by flattening

the arched floor of the chest (the diaphragm). It is attempted to illustrate this by Fig. 7.* C is the space allotted to the organs of respiration; the black outline is to represent the chest filled to its maximum with air after the deepest inspiration; the black line E may be considered as the floor or diaphragm; the inner and red line is to represent the chest after a forced and full expiration has been made, when, it will be observed, the arch of the diaphragm E is considerably increased, and the red line G is considerably depressed. Thus we may liken the act of respiration to the operation of a pair of common bellows. It follows, that the space existing between the red and black line, marked B B, is measured by the spirometer; hence it is certain that whatsoever disease impedes this mobility of the walls and floor of the chest, the amount of impediment will be manifested by this machine; moreover, it is *self-evident*, that as the lungs are the sole receptacle for the air we breathe, whatever disease there may be which affects their permeability for air, it will be manifested by the spirometer; and I believe that *no* disease can be detected in the chest that will not be found attended by a change in the bulk of air in the lungs.

If this be granted, how important is it to examine the *capacity*, as an *adjunct* to the other means of *detecting* disease amidst these vital organs.

I will now draw attention to the observations I have made upon diseased cases, which confirm me in this last assertion. On Diag. 1, I compare the diseased with the healthy cases. The upper line is the same as already noticed, to which is affixed the word "*good:*" the lower line contains the diseased cases. The difference between the two classes is very marked, and must forcibly impress us that this method of detection deserves the most attentive consideration.

I am sorry that the number of diseased cases is so small: but this even speaks more favourably for the distinction between the healthy and diseased cases; for had there been more cases, the curved line would have been much less curved; whereas, with few cases, *one* disturbing observation is clearly seen. We here see that the mean capacity of the diseased scarcely exceeds one half of that of the healthy, if it be so much.

The full particulars of the diseased cases have been taken down in the table of observations; amongst which there will be seen 20 cases of consumption in various stages. There are 12 cases in the earliest stage of this disease. I shall here give the capacity of these as observed, compared with the mean of the healthy cases of the same stature.

Early Stage of Consumption.

Capacity of Diseased. Cubic Inches.	Capacity of Healthy. Cubic Inches.
113	220
105	173
128	220
100	193
100	204
136	229
115	173
130	204
120	229
140	246
110	220
135	204

* Exhibited before the Society.

In the more advanced stage of the disease, the difference is much more considerable: thus,—

Advanced Stage of Consumption.

Capacity of Diseased. Cubic Inches.	Capacity of Healthy. Cubic Inches.
59	135
89	224
108	254
72	135
80	229
75	254
34·5	246
18	183

It is truly interesting to remark the broad difference here exhibited.

Not only does disease in the chest limit the natural capacity; but also an enlargement of any of the visceral organs, acting so as to prevent the arch of the diaphragm freely alternating in its curve. A moderate meal reduces the "capacity" from 4 to 6 cubic inches, and a plentiful dinner from 9 to 14 inches, according to the powers of the individual at table. The capacity of those who suffer from curvature of the spine is most remarkably small. One person was so low as 27 cubic inches, being the utmost quantity he could throw out of his chest by one full expiration.

The greatest capacity I have ever observed was that of Freeman and Randall, both measuring upwards of 6 feet 11½ inches. Freeman's capacity was 432 cubic inches, and Randall's 464 cubic inches. The lowest healthy capacity I have examined is that of Robertson, height 3 feet 9 inches, being 80 cubic inches. And it is worthy of mention that when, by arithmetical process, we reduce the capacity of Randall the giant in exact proportion to the difference of bulk between him and Robertson the dwarf, we bring it down to 79·56 cubic inches, which is *within* half an inch of the actual quantity blown by the latter.

The capacity of all the classes examined may be compared by referring to a table here suspended. (See Table I., p. 207.)

The relation between the capacity of the lungs and circumference of the chest appears as yet so feeble, that it is no guide to me.

I have combined this calculation of circumference and capacity, which will be seen amongst the other tables handed round; where it may be observed, that the mean of 11 men of 5 feet 8 inches, whose chests measure 35 inches in circumference, has a capacity of 235 cubic inches; while that of 10 men of the same height, whose chests are 38 inches, is only 226, being 9 cubic inches less. I may here mention, that it was in consequence of so often witnessing tall, narrow-chested men blowing so much more than broad-chested men, that I was induced to combine the height of the individual with the capacity. The only parallel remark I have seen in physiological writers upon respiration is that by Müller, who says (1st ed., vol. i., page 294)—"Herbst found that adults of large stature, when breathing tranquilly, inspired and expired from 20 to 25 cubic inches; persons of smaller stature 16 or 18 cubic inches."

I must now pass on to the other *grand* series of observations, upon the "*power*" of the inspiratory and expiratory muscles of the healthy in different classes, and of the diseased.

By the power of inspiration and expiration, I mean the greatest

effort that can be employed by all those muscles used in performing that function; and it will be found that if this observation be connected with the "*capacity*," we possess a *sure method* of detecting disease in the most important part of the human frame. The instrument with the dial face is that with which the observations have been made.

The resistance afforded to test these muscles was that of mercury; and according to the inches elevated by the respiratory muscles, in proportion was the indexhand moved opposite certain figures, by which figures I denominate a certain power either of inspiration or expiration, so that, according to the value of the figure, such is the relative power required to elevate the index to that figure. Hence the resistance is perfectly the same, whether we draw out of or blow into this tube, and *must* therefore measure the relative difference between inspiration and expiration. By a comparison of these efforts in different classes, I estimate the health of men employed in different trades, as will be shown. Certain words are affixed to these figures, as exhibited on Table A. (page 196); the figures on the right side denote the powers of inspiration; those on the left, those of expiration. It will be observed that the figures on the right are much higher than those on the left, because the power of *expiration* is greater than the power of *inspiration*: thus a "*remarkable*" inspiration is rated at 4·5 inches, while the corresponding expiration is 5·8 inches. These words are engraved on the dial, and are so fixed according to the result of 1100 observations. Diag. 2 is given to illustrate, upon the same principle as Diag. 1, the *power* of inspiration of 13 different classes; the perpendicular lines indicate the gradation of heights from 5 feet to 6 feet. The direction of the black curve marks the power of these 13 different classes; it will be seen to ascend gradually up to 5 feet 9 inches, from thence as gradually to descend; therefore the power of all these classes is greatest at 5 feet 9 inches. This line must not be taken as the true line of health. The line which I mark immediately above it is the one I term the "standard of health," because this dotted line is calculated from four classes of men, selected by surgeons as healthy, viz. Firemen, Metropolitan Police, Thames Police, and Royal Horse Guards (Blue).* In this standard line, the men of 5 feet 7 inches elevate 3·07 inches of mercury; and those of 5 feet 8 inches, 2·96 (nearly 3 inches); whereas in the black line, the course of the mixed multitude, the men of 5 feet 7 inches and 5 feet 8 inches elevate only 2·65; and the 5 feet 9 inches men, 2·75. This depression of the black curve is in consequence of the weakness of the paupers, the gentlemen, the mixed class, and the printers, being here included. According to the dotted line, the most powerful men are found at the height of between 5 feet 7 inches and 5 feet 8 inches.

For the convenience of the members present, I have reduced the height between 5 feet and 6 feet into four divisions, with the powers of inspiration and expiration of all the 13 classes, so that any combination of comparison between the different bodies of men may be made. (For the complete table see page 208.) The conclusion to be drawn as to inspiratory power is, that a man of 5 feet 7 inches or 5 feet 8 inches, if healthy, should elevate 3 inches of mercury. The gentlemen, we may observe, stand very much below this mark, at only 2·15 inches; so

* Their powers are given in Table II. (p. 208–9), as the "mean of four healthiest classes."

that I am compelled to call a gentleman a *tolerably good* gentleman of the middle stature, who can elevate 2·5 inches by his inspiratory muscles; but it is curious to remark, that at 5 feet 9 inches, 5 feet 10 inches, and 5 feet 11 inches, they stand better than the Thames police, and nearly as good as the fire brigade—the two best classes of men which have been submitted to this test. It will be seen that in this table the Grenadier Guards stand very high between 5 feet 3 inches and 5 feet 6 inches; but it must be observed, there are only four examined under this height; and the fact of their being *fifers*, whose vocation is the constant use of the respiratory muscles, causes this class to stand high at this particular height.

Let us now turn to Diag. 2, where the expiratory power is compared with the inspiratory power. The upper black curve is the expiratory power of the 13 classes; the broken highest line is the expiratory power of the four healthiest classes. There will be seen a vast difference between these two classes of muscles, which must be interesting to the physiologist. Here is exhibited the result of upwards of 1000 cases, which demonstrate that expiration is about one-third stronger than inspiration. And moreover, I confidently affirm that wherever the expiratory muscles are not stronger than the inspiratory muscles, disease is the cause of such variation.

The test upon the expiratory muscles peculiarly tries the abdomina viscera. I have frequently detected hernia (rupture) by this means: but where persons have a hernia, well supported by a truss, and have no *fear*, they may pass detection; this, however, has seldom occurred during the observations I have made. I have often detected those who are subject to severe head-aches and fits by these means, and frequently rupture of the drum of the ear. It is also worthy of remark, that I have found rupture of the drum of the ear manifested only in one direction; hence the expiratory force may detect it, and not the inspiratory; or the contrary may occur. Sometimes the rupture is detected by both experiments, but this is rare. I mentioned this fact to Mr. Gulliver, who said it perfectly corresponded with what he was induced to believe through other means.

I may cite a case in point, of a strong drayman, whose power of expiration naturally was manifested at ·55 of an inch; but when, at my request, he stopped his ears with his fingers, his expiratory power was increased to 5·50 inches; while his inspiratory power in both cases, *i. e.* with his ears open or shut, remained at 3·70. When I thus found his *expiratory* power nearly 10 times less than his *inspiratory*, it was evident that something was disordered.

This, together with other facts, may be seen upon referring to the manuscript table of diseased cases, which I here hand round to the members.

The crossed line at the termination of the expiratory curve (Diag. 2.) marks the direction the cases would take were the Horse Guards omitted. These men being enlisted under the superintendence of Mr. Gulliver, the curve exhibits the skill of selection, mounting considerably at its termination. Had I not examined this regiment, I should, from past experience, have considered 6 feet men much weaker; I do not believe any other regiment of 6 feet men to possess such power. The inspiratory power of twelve 6 feet men in the first battalion Grenadier Guards

was only 1·92 inches, while that of 31 of the same height of the Blues was 2·71 inches.

I am induced to believe that the test upon the inspiratory muscles is a sure guide to the state of a man's health. The expiratory muscles, owing to a man's vocation, may be trained to an enormous extent, as I noticed in the fifers. I have remarked the same in jewellers, who use the blow-pipe much. Therefore, when a man's occupation is such as to call these muscles much into use, we must rate his expiratory power at a higher figure. I shall show this shortly by the tables here suspended.

We have seen the *capacity* of the lungs in the healthy and diseased cases compared; now I will exhibit, by Diag. 3, the like comparison of the *inspiratory power* between the same.

The upper line to which is affixed the word *good*, is the same noticed as the lower broken line in Diag. 2; the lower black line is the curve of the diseased. The weakness induced by disease in the trunk of the body is here as *broadly* indicated as that of the capacity, being about one-half: had the cases been more numerous, this curve would have been more regular, and I believe lower than it appears at present; therefore the few cases test the comparison the better. When we combine the capacity and power together, there is a certain harmony which must pervade the three observations, *provided* the individual is *healthy*. Hence, I venture to say, the instruments for estimating *capacity* and *power* will clearly test the presence of disease.

I shall now pass on to exhibit the effect of occupations upon the inspiratory power: as I believe the inspiratory power to indicate the state of the general health, the comparison will be interesting; and if it be found to agree with what other observers have mentioned, this will prove its correctness also.

Diag. 4 shows the comparison of four classes—the pugilists, the Thames police, the paupers, and the gentlemen. The black continuous line at the bottom is the path of the gentlemen; the next above, that of the paupers it will be seen, these two classes struggle in company up to 5 feet 9 inches, from which point that of the gentlemen rapidly ascends.

The waved line represents the Thames police, a remarkably fine class of men. The sudden fall, observed at 5 feet 10 inches, and 5 feet 11 inches, is owing to the comparatively small number examined at this height. A slight cold in the head (as it is termed) of one individual, may have occasioned this.

Above all these are the pugilists, without exception the finest class of men I have examined: in fact we may consider each man of this class as a series of men; for we know not how many fall down the ladder of their fame, before they arrive at that step where I examined these. I may mention, it was not a little difficult for me to examine these people; since the correctness of the observation depends upon the air passage in the nostrils being free, and I have not unfrequently found that passage impeded by the consequences of their professional *engagements*: I therefore had recourse to testing with the mouth, a method always liable to error, from the power of the cheeks and tongue interfering.

According to the elevation of these lines I estimate the vital powers.

I here exhibit a similar table of comparison between the standard line

of health, and that of the paupers. How far poor-house diet may be connected with this lowering of the line, I must leave for others to determine. Age, doubtless, must be taken into account; but, it appears to me. not until after fifty.

In Diag. 5, I compare three very unhealthy classes with the standard line. The continuous line at the bottom, represents the compositors, the very *worst* men I have examined; they even stand below the paupers, except at the heights of 5 feet 8 inches and 5 feet 9 inches. The broken line are the pressmen, a better class of men altogether, with the exception of one dip between 5 feet 8 inches and 5 feet 9 inches, but this was caused by one solitary instance, and that was at the height of 5 feet 9 inches. Nearly between these two classes will be seen the waved line indicating the course of the artizans, a very poor set of men. The double line is the standard line, above all.

Numerous other comparisons of the inspiratory powers may be made between different classes, by referring to the table (II. p. 208). I shall now pass on to the expiratory power.

Diag. 6, gives the expiratory power, and exhibits by the bottom line the diseased cases: the dotted line above that, is the curve for the gentlemen; the double line above, is for the paupers; and these two, for the most part, are closely mingled together, up to 5 feet 10 inches. It cannot be said that the paupers here are the worst. The broken line above that, are the sailors; and above them, again, the crossed line are the Thames police.

As an illustration of employment increasing the expiratory power over the inspiratory, I would just refer to the table (II. p. 208), wherein the inspiratory power of the Thames police, and that of the Metropolitan, appear as nearly equal as possible; but if we look at another of these tables, we see the expiratory power of the Thames police greatly exceeding that of the Metropolitan police. This minute distinction of power between these two classes is very satisfactory, exhibiting that the one class of men use their upper extremities more than the other. The Metropolitan, policeman deters the thief by the activity of his lower extremities; the Thames policeman, by that of his upper extremities.

Many other interesting combinations might be made from the 10,000 facts I have gathered: thus, for instance, we see, the prevalent weight of the 1151 individuals, is from 10½ to 11 stone; the next in frequency, 12 stone; the next, 12½ stone; the next, 9½ stone; the next, 13 stone; the next, 13½ and 14 stone; and the last, 7½ and 15 stone.

Table V. (p. 212) shows the number of ordinary respirations per minute, observed when in the sitting posture. It will be seen that the greatest number of individuals breathe 20 times a minute; next to this, is 16 times per minute; then, 24: these, it will be seen, are the prevailing numbers; the lowest was 9 respirations, and the highest 40 respirations, per minute. It is worthy of mention that by this table the respirations appear more generally an *even* number of times per minute than otherwise.

Table VI. (same page) exhibits in like manner the beats or pulsations of the heart per minute: 80 is the prevailing number; next to this, 84; next, 100; next, 92, &c.: the lowest pulsation was 48, and the highest 180, per minute. These were all taken in the sitting posture. Care was taken never to note the pulse when excited by physical ex-

ertion; but if by any other stimulant through the medium of the mind, then it was taken exactly as it appeared. I believe it always best in statistical research, to note the cases, whatever they may be, exactly as they present themselves, and not to wait until the case *comes* to what we *wish* it to be. That we may be kept steady in a research, we must note and believe what we see—not see what we believe. By these two last tables the prevailing numbers run as four beats of the heart to one respiration.

In another table* I illustrate the circumference of the chest, both of the total numbers examined, and of the several classes, by distinguishing colours. The figures at the left hand, are to signify the increasing dimensions of the chest, from above downwards, increasing by half inches; the length of the lateral lines, is to represent the different numbers under each of these measurements of the chest. It will first be seen that 37-inch chest is the prevailing size; next to this, 35-inch; and in detail it will be seen that the colouring indicates the measurement of the different classes. Thus K, the gentlemen, measure from 34 to 35 inches as their average; A, the sailors, from 37 to 37½ inches in circumference; the fire brigade, B, from 38 to 39½ inches; C, the metropolitan police, from 34 to 36 inches, and at 37 are most numerous; D, the paupers, are mostly placed between 31 and 34 inches; E, the artizans, are most numerous from 30 to 36 inches; and so on.

I must next turn to another diagram,* which, on the same plan, exhibits the heights; and as the relation between height, capacity, and power, is shown to be so close, a table of heights will almost give us a table of power also. The prevailing heights are 5 feet 8 inches and 5 feet 9 inches. B, the firemen, are well selected, principally measuring from 5 feet 6 inches to 5 feet 9 inches. The Metropolitan police are a taller set of men, therefore of less physical strength. On the other hand, D, the paupers, are low of stature, ranging chiefly between 5 feet 2 inches and 5 feet 6 inches L, are the Horse Guards, which do not commence until all the rest have nearly disappeared, *i. e.* at 6 feet; they terminate at the indefinite height of 6 feet +.

I now draw the attention of the members to a table (IV., page 210) of the capacity compared with weight. Where height and weight correspond, there will be found a relation between weight and capacity; but, as height and weight do not always correspond, the disturbing cases of fat men here account for the relation between weight and capacity of the lungs appearing feeble. I shall in future distinguish the weight of the corpulent and spare individuals, to determine this point more clearly.

With these remarks I conclude the subject of the tables, which still contain a vast quantity of matter not even hinted at, and no less valuable than what has been touched upon.

The tables of calculations which afforded me the matter for the diagrams here exhibited, may all be examined; not *one* case that I ever observed has been kept back, nor has one fictitious case been added. During the time of my research I examined every person I could possibly obtain, from the scavenger, the hawker, or the street mountebank, up to the affluent gentleman: all were requested to submit themselves to

* Exhibited before the Society.

these tests. By so doing, I trust that a foundation sufficiently broad and firm has been laid for me to request the attention of all the gentlemen present to an examination of the utility of such a method for testing the vital powers (if I may be allowed the term) of men to be selected for any public service. I believe at present *no* such test is used in the army or any other organised force. By these means I have frequently detected men as diseased, that were considered not so. I may mention one case (though several might be cited), of a man 6 feet 4 inches, in the Queen's Company, Grenadier Guards, whose capacity was only 102 cubic inches instead of 300. This man was given to me as a healthy case; but I classed him among the diseased; and, upon inquiry, it was found that he had solicited to be relieved from certain physical duties. Others, again, who have considered their lungs to be in a bad state, have, by this test, been convinced that they were not so, to their great satisfaction, and improvement in health and spirits.

I would also respectfully invite the attention of prison inspectors to this apparatus. Let every man that enters a prison be tested on entering, and again on leaving; a comparison of the two observations will determine his loss or gain in health and strength. Also I solicit the attention of those who examine for insurance offices; since even non-professional men can make these experiments with certainty: by these means a vast amount of facts would be gathered together, so that the tables of heights might be graduated into decimal parts of an inch, instead of whole inches. And, lastly, I would recommend it to the consideration of all who inquire into the effect of employments upon health; for by it I have shown how low the printers and the artisans rank in that respect.

An idea of this kind occurred to a no less accurate observer than Thackrah, but of this I was not aware until I had completed all these observations. Thackrah mentions (page 21) that he inverted a glass jar, filled with water, and measured the quantity displaced by "one expiration." He submitted 19 individuals of the 14th Light Dragoon Guards to this test, whose average capacity was 217 cubic inches; therefore they must have been about 5 feet 8 inches high. He adds, "this test affords useful information in diseases of the lungs, as well as a ready index to the native power of the respiratory organs." "It would afford," continues our author, "an important assistance, I conceive, in examining recruits for the army." He also examined some shoemakers and tailors by this method; but he connected no other observation with this, but that of the circumference of the chest; therefore his observations would not be of much value. Until I connected the height with the capacity, I found all was confusion: after examining upwards of 100 persons, I was nearly giving up the research, when the idea fortunately occurred to me, of observing the capacity, &c., in connection with the height.

With these explanations, I now leave the subject for the discussion of the Society.

TABLE I.—*The Mean Capacity of the Lungs of 13 Classes, with the Total Mean of the Mean.*

Class.	0 to 5 ft.		5 ft. to 5 ft. 1 in.		5 ft. 1 in. to 5 ft. 2 in.		5 ft. 2 in. to 5 ft. 3 in.		5 ft. 3 in. to 5 ft. 4 in.		5 ft. 4 in. to 5 ft. 5 in.		5 ft. 5 in. to 5 ft. 6 in.	
	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.
Seamen	151	5	206	1	192	7	219	1	218	10	213	9	217	15
Firemen	..	..	..	..	..	..	..	..	210	1	208	2	218	20
Metropolitan Police	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thames Police	158	1	..	..	..	..	..	..	187	6	206	9	228	9
Paupers	151	7	166	3	162	10	180	10	174	21	191	20	189	19
Mixed Class (Artisans)	80	1	185	1	162	5	181	5	185	17	191	16	192	20
Grenadier Guards	..	..	..	..	..	..	168	1	..	..	218	1	199	2
Compositors	..	..	..	..	176	3	165	2	196	5	188	6	208	7
Pressmen	..	..	152	1	..	..	..	..	..	..	213	2	203	8
Draymen	..	..	..	..	..	..	..	..	..	..	..	..	192	1
Gentlemen	..	..	..	..	145	1	161	1	156	7	177	9	189	14
Pugilists, &c.	..	..	..	..	202	1	218	2	218	1	211	4	217	3
Horse Guards (Blue)	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Mean	135	14	177	6	173	27	184	22	193	68	208	78	204	118

Class.	5 ft. 6 in. to 5 ft. 7 in.		5 ft. 7 in. to 5 ft. 8 in.		5 ft. 8 in. to 5 ft. 9 in.		5 ft. 9 in. to 5 ft. 10 in.		5 ft. 10 in. to 5 ft. 11 in.		5 ft. 11 in. to 6 ft.		6 ft. +	
	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.	Cub. in.	No.
Seamen	226	14	229	15	239	11	258	18	273	12	270	6	246	2
Firemen	215	17	231	26	231	20	237	3	260	1	249	2	..	..
Metropolitan Police	234	4	228	33	226	46	248	22	234	13	262	12	281	11
Thames Police	222	15	246	17	250	10	240	5	257	3	..	..	..	..
Paupers	210	10	187	9	199	10	242	1	240	3	..	..	..	..
Mixed Class (Artisans)	210	20	222	28	238	16	246	14	238	7	269	9	..	..
Grenadier Guards	..	..	228	7	233	22	240	16	232	11	253	9	258	14
Compositors	227	5	215	8	214	6	231	3	..	..	253	1	..	..
Pressmen	204	3	223	7	245	1	239	4	247	2	..	..	..	..
Draymen	241	1	218	3	223	4	245	1	261	6	248	4	..	..
Gentlemen	208	10	208	18	208	16	236	8	254	12	250	5	262	5
Pugilists, &c	267	3	206	1	243	2	273	3	272	5	248	2	..	..
Horse Guards (Blue)	..	..	..	..	..	..	..	..	..	..	255	30	275	26
Total Mean	224	102	220	172	229	164	246	98	254	75	255	82	260	62

TABLE II.—*The Mean Power of Inspiration and Expiration of all the Cases presenting the ordinary*

Class.	0 to 5 ft.			5 ft. to 5 ft. 1 in.			5 ft. 1 in. to 5 ft. 2 in.		
	Insp.	Exp.	No.	Insp.	Exp.	No.	Insp.	Exp.	No.
Seamen	3·17	3·44	5	2·20	2·60	1	2·03	3·48	7
Firemen	..	..	..	..	..	..	..	..	..
Metropolitan Police .	..	..	..	..	..	..	..	..	..
Thames Police . .	2·55	3·28	1	..	..	..	..	..	..
Mixed Class . . .	3·00	3·74	1	2·00	3·36	1	2·52	3·25	5
Grenadier Guards .	..	..	..	..	..	..	..	..	..
Pugilists, &c. . .	..	..	..	..	..	..	3·80	4·75	1
Draymen	..	..	..	..	..	..	..	..	..
Gentlemen . . .	..	..	..	..	..	..	1·50	2·80	1
Horse Guards (Blue)	..	..	..	..	..	..	..	..	..
Total Mean . .	2·90	3·48	7	2·00	2·98	2	2 46	3·57	14
Mean of Diseased Cases . . .	0·82	1·37	5	1·30	3·00	1	1·16	2·14	4
Mean of four Healthiest Classes . . .	2·55	3·28	1	..	..	..	..	..	..

Class.	5 ft. 6 in. to 5ft. 7 in.			5 ft. 7 in. to 5 ft. 8 in.			5 ft. 8 in. to 5ft. 9 in.		
	Insp.	Exp.	No.	Insp.	Exp.	No.	Insp.	Exp.	No.
Seamen	2·63	3·56	15	2·87	4·15	14	3·11	4·19	9
Firemen	3·17	3·95	15	3·02	4·09	15	3·08	4·50	18
Metropolitan Police .	3·07	4·05	4	2·89	4·07	39	2·81	4·10	46
Thames Police . .	2·97	4·44	16	3·08	4·31	16	3·05	4·66	11
Mixed Class . . .	2·31	3·38	21	2·16	3·17	27	2·46	3·50	17
Grenadier Guards . .	..	..	..	2·68	3·83	8	2·94	3·89	19
Pugilists, &c. . . .	4·20	6·42	2	3·65	4·61	2	3·70	4·84	1
Draymen	2·80	3·55	1	2·73	4·59	3	2·37	4·16	3
Gentlemen . . .	2·35	2·62	12	2·35	3·30	16	2·40	3·30	16
Horse Guards (Blue)	..	..	..	..	..	..	..	..	..
Total Mean . .	2·93	3·99	86	2·82	4·12	140	2·88	4·12	140
Mean of Diseased Cases . . .	0·79	1·70	4	1·67	1·88	7	1·32	1·78	8
Mean of four Healthiest Classes. . .	3·07	4·18	35	2·96	4·13	70	2·91	4·28	75

examined in 10 *different Classes, without any separation for disease; thus Average of Health or Power.*

5 ft. 2 in. to 5 ft. 3 in.			5 ft. 3 in. to 5 ft. 4 in.			5 ft. 4 in. to 5 ft. 5 in.			5 ft. 5 in. to 5 ft. 6 in.		
Insp.	Exp.	No.	Insp.	Exp.	No.	Insp.	Exp.	No.	Insp.	Exp.	No.
2·40	3·74	1	2·48	3·89	9	2·68	4·23	8	2·84	4·25	15
..	..	..	2·70	4·51	2	2·21	3·82	3	2·80	3·84	19
..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	2·70	4·26	6	3·05	4·50	9	2·58	4·34	9
2·31	3·15	5	1·85	2·69	17	2·30	3·05	18	2·40	3·37	16
4·50	5·36	1	..	..	..	4·50	5·10	1	2·70	2·90	2
2·40	2·41	2	3·50	3·74	1	3·53	5·29	3	3·86	4·75	3
..	..	..	..	..	..	..	..	..	1·30	1·70	1
2·55	3·00	1	1·77	2·92	6	2·01	2·10	7	1·94	3·21	11
..	..	..	..	..	..	..	..	..	..	..	..
2·83	3·53	10	2·50	3·66	41	2·89	4·01	49	2·55	3·54	76
1·00	1·81	4	1·34	2·30	4	0·74	1·00	1	1·25	1·52	9
..	..	..	2·70	4·32	8	2·84	4·33	12	2·70	3·87	29

5 ft. 9 in. to 5 ft. 10 in.			5 ft. 10 in. to 5 ft. 11 in.			5 ft. 11 in. to 6 ft.			6 ft. to 6 ft. +		
Insp.	Exp.	No.	Insp.	Exp.	No.	Insp.	Exp.	No.	Insp.	Exp.	No.
2·66	3·84	18	2·41	3·86	12	2·61	4·15	6	2·00	4·00	1
2·69	3·33	5	2·40	3·74	1	3·65	6·81	2	2·10	2·80	1
2·92	4·00	23	2·78	3·41	12	2·33	3·23	12	2·75	3·77	8
2·54	4·27	5	2·78	4·45	3	..	..	..	..	..	..
2·41	3·67	15	2·07	2·45	7	2·14	3·08	11	2·77	4·10	2
2.23	3·49	18	2·56	3·76	11	1·92	3·17	12	2·46	3·82	14
3·78	4·38	2	3·77	4·89	4	3·25	4·93	2	3·52	4·64	2
4·50	5·43	3	3·21	4·30	6	2·02	3·13	2	3·15	5·00	1
2·74	3·59	7	2·84	3·49	12	3·12	4·94	5	2·38	3·70	4
..	..	..	..	..	..	2·71	4·84	31	2·68	4·66	27
2·94	4·00	96	2·72	3·81	68	2·68	4·29	83	2·64	4·05	60
0·93	1·60	3	0·88	1·59	3	0·40	2·25	1	1·65	4·02	1
2·83	3·94	33	2·77	3·63	16	2·65	4·48	45	2·67	4·41	36

TABLE III.—*Mean of the Respiratory Power of the*

Class.	0 to 5 ft.			5 ft. to 5 ft. 1 in.			5 ft. 1 in. to 5 ft. 2 in.		
	Insp.	Exp.	No.	Insp.	Exp.	No.	Insp.	Exp.	No.
Paupers, Mean . .	1·79	2·45	7	1·46	1·93	3	2·52	2·96	9
Compositors, Mean .	..	..	..	..	..	..	2·32	2·96	3
Pressmen, Mean . .	..	..	..	2·20	5·00	1	..	..	..
Total Mean of Mean of Printers . . .	..	..	..	2·20	5·00	1	2·32	2·96	3

Class.	5 ft. 6 in. to 5 ft. 7 in.			5 ft. 7 in. to 5 ft. 8 in.			5 ft. 8 in. to 5 ft. 9 in.		
	Insp.	Exp.	No.	Insp.	Exp.	No.	Insp.	Exp.	No.
Paupers, Mean . .	2·45	3·33	10	1·96	2·71	8	1·87	3·33	9
Compositors, Mean .	2·05	3 10	5	2·43	3·22	7	2·83	3·41	8
Pressmen, Mean . .	2·10	2·95	3	2·62	3·58	8	1·65	2·05	1
Total Mean of Mean of Printers . . .	2·07	3·02	8	2·52	3·40	15	2·24	2·73	9

TABLE IV.—*The Mean capacity of the Chest,*

Class.	7 to 7½	No.	7½ to 8	No.	8 to 8½	No.	8½ to 9	No.	9 to 9½	No.	9½ to 10	No.	10 to 10½	No.
Seamen . . .	208	8	132	1	196	4	203	2	206	11	232	7	234	26
Firemen . . .	..	..	..	..	..	..	..	..	206	2	199	4	213	5
Metropolitan Police	..	..	..	..	..	..	..	..	198	5	212	10	227	24
Thames Police .	..	..	..	..	..	..	158	1	209	4	208	5	240	11
Paupers . . .	..	..	173	2	178	8	163	14	141	14	176	27	192	19
Mixed Class (Artisans) . . .	164	1	160	6	173	8	199	11	202	23	199	25	220	19
Grenadier Guards	..	..	..	..	..	..	186	2	..	..	209	4	234	4
Pugilists . . .	..	..	..	..	211	2	198	1	..	..	211	2	195	1
Pressmen. . .	..	..	..	..	..	..	199	5	210	1	194	5	213	7
Compositors . .	..	..	..	..	174	7	206	7	206	5	185	6	227	6
Draymen . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Horse Guards (Blue) . .	..	..	..	..	..	..	..	..	..	..	..	..	230	1
Gentlemen . .	149	1	171	3	184	3	193	4	192	11	199	10	220	16
Total Mean.	173	10	159	12	186	32	189	47	196	76	202	105	220	139

Paupers and the Printers, (Compositors and Pressmen).

5 ft. 2 in. to 5 ft. 3 in.			5 ft. 3 in. to 5 ft. 4 in.			5 ft. 4 in. to 5 ft. 5 in.			5 ft. 5 in. to 5 ft. 6 in.		
Insp.	Exp.	No.	Insp.	Exp.	No.	Insp.	Exp.	No.	Insp.	Exp.	No.
2·08	3·30	10	2·30	3·38	21	2·17	3·30	20	1·93	3·13	19
1·65	2·52	1	2·13	3·23	5	2·17	2·91	4	1·65	2·85	7
3·35	4·20	1	..	..	..	2·81	4·17	3	2·04	3·27	8
2·50	3·36	2	2·13	3·23	5	2·49	3·54	7	1·84	3·06	15

5 ft. 9 in. to 5 ft. 10 in.			5 ft. 10 in. to 5 ft. 11 in.			5 ft. 11 in. to 6 ft.			6 ft. +		
Insp.	Exp.	No.	Insp.	Exp.	No.	Insp.	Exp.	No.	Insp.	Exp.	No.
2·55	3·46	1	1·47	1·67	2	1·61	3·70	4	..	..	..
2·00	2·39	2	..	..	..	1·50	1·91	1	..	..	..
2·95	3·93	3	2·62	3·72	2	..	..	..	..	..	..
2·47	3·16	5	2·62	3·72	2	1·50	1·91	1	..	..	..

compared with the Weight of the Body (stone of 14 lb).

10½ to 11	No.	11 to 11½	No.	11½ to 12	No.	12 to 12½	No.	12½ to 13	No.	13 to 13½	No.	13½ to 14	No.	14 to 14½	No.	14½ to 15	No.
228	15	257	20	236	9	254	8	271	5	290	1	205	1	..	..	..	..
226	11	235	11	226	18	223	10	219	7	233	3	212	5	224	1	570	3
236	23	237	29	244	23	255	18	248	8	284	3	237	2	..	..	..	..
234	23	245	11	236	9	198	3	196	4	..	..	258	2	203	1	212	1
178	12	183	10	210	7	176	5	..	..	174	3	..	..	256	1	..	..
217	20	233	10	249	14	237	8	269	6	227	3	226	6	237	1	..	..
222	11	231	8	247	19	241	18	251	10	267	4	228	2	307	1	..	..
260	1	225	3	265	3	..	..	297	2	279	3	204	2	290	1	..	..
216	8	237	3	..	..	..	..	..	..	186	1	..	..	..	..	..	..
226	5	207	3	230	2	212	1	216	1	219	1	..	..	..	..	..	..
..	..	192	1	234	4	236	3	254	5	..	..	272	2	227	2	231	3
238	1	262	5	261	8	267	13	260	10	286	6	252	7	273	6	318	1
224	17	228	14	218	4	246	4	233	8	224	4	237	3	202	2	220	2
225	147	228	128	239	120	231	91	245	66	242	33	233	32	246	16	310	10

TABLE V.—*Number of Respirations per Minute, observed when in the Sitting Posture, in* 1,080 *Cases considered to be Healthy.*

No. of Respirations per Min.	No. of Cases.	No. of Respirations per Min.	No. of Cases.	No. of Respirations per Min.	No. of Cases.	No. of Respirations per Min.	No. of Cases.
9	1	18	81	27	2	36	1
10	2	19	11	28	26	37	..
11	1	20	384	29	2	38	..
12	16	21	31	30	5	39	..
13	10	22	67	31	..	40	1
14	12	23	11	32	6		
15	9	24	153	33	..	Total	1,080
16	157	25	15	34	1		
17	71	26	4	35	..		

TABLE VI.—*Number of Pulsations per Minute, taken in the Sitting Posture, in* 1,086 *Cases considered to be Healthy.*

Pulse per Min.	No. of Cases.	Pulse per Min.	No. of Cases.	Pulse per Min.	No. of Cases.	Pulse per Min.	No. of Cases.
48	1	69	3	87	1	108	9
52	1	70	14	88	71	110	1
53	2	72	74	89	15	112	15
56	2	73	50	90	19	113	3
57	2	74	2	92	66	116	10
58	1	75	2	93	3	118	2
59	1	76	72	94	3	120	16
60	22	78	12	95	9	124	2
61	1	79	2	96	47	128	2
62	3	80	226	97	1	130	1
64	15	81	..	98	2	132	1
65	2	82	6	100	103	133	1
66	6	84	118	102	2	140	1
67	2	85	1	104	27	144	1
68	3	86	4	106	1	180	1

Pulse per Min.		Pulse per Min.		Pulse per Min.	
48	No. of Cases 1	53	No. of Cases. 2	62	No. of Cases. 3
52		56		68	
58		57		69	
59		65		93	
61		67		94	
85		74		113	
87		75			
97		79			
130		98			No. of Cases. 4
132		102		86	
140		118			
144		124			
180		128			

Report on the Infant Industrial Schools of Tuscany. By Signor Enrico Mayer, of Milan.

[*Read before the Statistical Section of the British Association at Cork, Aug. 21st,* 1843.]

The first infant schools, or, as they are there called, asylums, established in Tuscany, were opened simultaneously in Leghorn and Pisa in 1833. A third was soon after opened in Florence, and the example then was generally followed. They are supported wholly by voluntary contributions, and consequently their increase soon reached its furthest limit. There are now twenty of those infant schools, with 2000 children. The annual expenditure comes to about 1*l.* sterling a child, house rent, servant's wages, teacher's salary, and soup, being all included. The management of these schools generally rests with committees of ladies, who take by turn the duty of inspection: the remarks written in the inspectors' book become the subject of deliberation at the monthly meetings of the committee. The infant asylums of Tuscany are intended for the poor, and are entirely gratuitous. They are generally divided into two classes, having each a separate room, and a separate mistress. The first class contains children from eighteen months or two years to four or five years old. The second class contains children from four or five to seven or eight. A play-ground is attached to every asylum, and the children perform easy gymnastic exercises, which, however, do not interfere with their own choice of amusements. The introduction of manual works in the infant asylums in Italy, constitutes one of the chief differences between them and similar institutions in France or England, and experiments are now making to continue the habits of early industry thus acquired, by procuring some work in the primary schools. A committee of tradesmen and artisans forms part of the society for infant schools at Florence, and they are to provide the children with some easy work, and facilitate afterwards their being employed in the exercise of different arts and trades. Linear drawing and the rudiments of geometry and mechanics are taught in the superior classes, but confining the instruction to that which can be of use in the exercise of every mechanical profession, without taking any one particularly in view. It is anxiously desired that the manual work of the children should be of a nature to be carried on individually, so that the social element of family life should continue undisturbed among them, and the infant population should be preserved as long as possible from the infection of factories. *Instruction* is much less than *education* the object of these infant asylums; these are made as much as possible conducive to moral training, and this by the most simple and gentle means of a maternal guidance. In the school room the children pass through a series of exercises calculated to develope their mental and bodily faculties without tiring them. They are never kept sitting for more than a quarter of an hour at a time. The religious instruction of the children is directed by the curate of the parish in which the asylum is established. The mistresses of the asylums keep a journal, in which the moral history of the institution may be said to be contained, and from which a number of most interesting facts have been extracted, elucidating the workings of human intelligence and human affection, at an age which has not, until now, been sufficiently studied by the moral philosopher. Though the Tuscan infant asylums are of so recent a date, yet their effects are already, and in a remarkable

degree, perceptible. The improvement in the health of the children received in the Tuscan asylums, is a most striking fact. The study of this fact on the part of our medical committees, has led to most important observations, not only with respect to the infants themselves, but extended to their families, and indeed to the whole of the poor population of our towns, and to the various districts of the towns themselves. The cases of death in our asylums is between 2 and 3 per cent., whilst the general mortality of children between two and six is in Florence 16 per cent. The same results have been observed in Lombardy, where infant asylums are more numerous than in Tuscany. A thorough reform of every system of education, going through every species of schools, will be necessary, in order to put them on a par with the high educational character of our infant schools. The moral results, likewise, are not confined to the infants themselves, but are extended to their families. A great proportion of the children received at the infant asylums in Florence, are found to come from the Foundling Hospital; indeed, out of 600 children *four hundred* belong to that class. They are children whose parents were forced by extreme destitution to abandon them; but as soon as our infant asylums were known to exist, parental affection resumed its rights in the hearts of those hundreds of parents, and a dishonouring brand was wiped away from the head of those hundreds of children, who found again the joy of their family, and were restored to their name and their civil condition. In the three years anterior to the opening of the infant asylums, the average number of children taken out of the Foundling Hospital was 176; but in 1833, when the asylums were first established, the number withdrawn was 214, and in 1837 it increased to 404. Few facts more pregnant than this with important consequences, have ever been brought to light in the moral statistics of any country. The author, in conclusion, pointed out the superior efficacy of the elevating and kindly treatment of men above the harsh and repressive. "Who," he observes, "has not seen, in the bad direction of public instruction, or in the mismanagement of public charities, a necessity for the increase of coercive institutions, which yet prove insufficient for the repression of crime; and has not learned to conclude that there may be a system of instruction which teaches no virtue, a system of charity which relieves no misery, and a system of punishment which puts a stop to no crime?"

Second Report of the Committee of the Statistical Society of London on Hospital Statistics.

In December, 1840, a committee was appointed by the Council of the Statistical Society "to consider the best means of obtaining periodical enumerations of the patients in the London Hospitals." The first step which the Committee took, on entering upon its duties, was to obtain an enumeration of the patients and other persons resident in the various hospitals of the metropolis during the first week of January, 1842. The results of this first enumeration, together with other tables of interest, will be found in the fifth volume of the Journal of the Statistical Society, p. 168. A second enumeration was made on the 9th of January, 1843, and returns were obtained from all the general hospitals.

The number of patients in these hospitals at the date of the second enumeration is shown in the following Table.

TABLE I.

	Males.	Females.	Total.
Bartholomew's . . .	250	239	489
Guy's	257	193	450
St. Thomas's . . .	253	163	416
London	211	111	322
St. George's . . .	173	103	276
Middlesex	120	121	241
Westminster . . .	62	62	124
University College. .	54	53	107
King's College. . .	60	35	95
Charing Cross . . .	51	63	114
Grand total . .	1,491	1,143	2,634

This number is somewhat in excess of that obtained by the Census Commissioners on the night of the 6—7th of June, 1841; when the patients enumerated were, males 1482, females 1081; total 2563.

The males and females are nearly in the same proportion in both returns, there being, in round numbers, about 15 males to 11 females. As might be anticipated, the mortality of males bears a much higher ratio to the mortality of females, than the hospital population of the one sex to that of the other. The hospital population being as 15 to 11, and the mortality as 13 to 7, (1260 to 708, see Table VII.)

The returns obtained from the ten general hospitals present a total of 2582 cases in which the name of the disease is specified, making with 52 unspecified cases the above total of 2634. The ages also are specified in all but 10 cases. The diseases and ages are jointly enumerated in Tables II., III., and IV., in the first two of which the sexes are given separately.

The returns obtained from the hospitals comprise some other particulars of interest. The average duration of a patient's stay in an hospital, for instance, may become an element in calculations of expense, and in the case of some diseases may even become a consideration of importance. A table, therefore, has been prepared, showing the length of time that the several patients had been in hospital at the time of the enumeration. (See Table V.)

If we assume that the actual stay in the hospital was the mean between the two extremes at the head of each column, we shall have, as the average stay in hospital of the 2626 patients whose stay is accurately stated, about 46 days, or six weeks and a-half.

In Table VI. the diseases and their duration up to the date of enumeration are stated. The table may furnish some useful elements of calculation, and of comparison with Table VII., in which the mortality of the London hospitals for the year 1842 is given in detail.

Table VII., which has been placed at the disposal of the Society by the kindness of the Registrar-General, possesses considerable interest. It comprises the deaths occurring in the general hospitals which have sent in their enumerations, and supplies important data for comparison with the preceding tables.

One of the most interesting facts displayed by this table is the great number of deaths from consumption that take place in the hospitals

of London in spite of the strict rules which in most of the subscription hospitals forbid their admission, and which are for the most part very rigidly enforced. Of 1968 deaths from all causes, no less than 322 were from consumption, being between one-sixth and one-seventh of the total mortality of hospitals, but less than 5 per cent. of the total mortality of the metropolis from that cause. It will be seen that the number of deaths of females from this disease in hospitals is less than half that of males, a fact which corresponds with the greater prevalence of consumption in the male inhabitants of large towns. It is necessary, however, to correct this statement as to the disproportionate mortality of men by the fact already alluded to; that the male population of hospitals is larger than the female in the proportion of 15 to 11. It is not a little remarkable, moreover, that in the face of this disproportion in the deaths from consumption, the enumerated cases of the disease amount to 28 males, and 34 females. At the time of the enumeration, therefore, there were more females in the London hospitals labouring under consumption than males, and yet the mortality of males is more than double that of females. The age of death in this as in other diseases is a very important and interesting heading in this table.

Mortality in the Hospitals at different Ages.

Ages . . .	0—3	3—5	5—10	10—15	15—20	20—30	30—40	40—50	50—60	60—70	70—
Deaths in the year 1842	37	29	84	64	100	364	376	369	256	136	81
Resident Patients according to one enumeration . .	10	28	98	135	371	799	488	365	206	95	29
Annual Mortality per cent. . . .	370	109	86	47	27	46	74	101	124	144	279

To determine the average number of patients resident, more than one enumeration should be taken; but the relative numbers at the respective ages probably do not vary very much; and the facts before us bring out some interesting results, and may suggest others of still greater importance. If we assume that the London hospitals contained, through the year 1842, on an average, 799 patients aged 20 and under 30 years, then, as 376 deaths occurred at that age, the annual mortality must have been at the rate of 46 per cent. The deaths of patients between the ages 40—50, were 369; the average number of patients was 365; and the annual mortality 110 per cent. The mortality is highest in infancy, descends to 27 per cent. at the ages 15–20, and rises progressively again as age advances, to 279 per cent.

This is not the mortality of cases, but the mortality in a given time, out of a given number constantly sick. It will be rendered, perhaps, more intelligible, by supposing the patients lodged in eleven different hospitals, and that each hospital contains 100 beds always occupied, fresh patients taking the place of those removed by death, recovery, or discharge. The table shows that, in the hospital for 100 children under three years of age, 370 deaths would occur annually; that in the hospital for young persons between the ages 15—20, only 27 would die annually; that the hospital for persons aged 40—50 would have 101 annual deaths; and so on, for other ages. Admitting that the treatment was equally efficient at all ages, there are at the three periods of life,

20—30, 30—40, 40—50, differences caused by age alone in the mortality of the sick, expressed by the numbers, 46, 74, and 101. It is impossible, therefore, in a practical point of view, to determine the relative value of different methods of treatment without reference to the law of mortality at different ages.

The tables show also the influence of age on the rate of mortality, among persons labouring under the diseases distinguished in the returns. Compare, for instance, the number of consumptive patients, and the number of deaths from consumption at the several ages, with the same facts for heart disease.

Phthisis.

Ages . .	Under 20	20—30	30—40	40—50	50—70	All Ages.
Deaths in the Year 1842	32	91	88	62	48	321
Consumption Patients resident, according to the Society's enumeration	4	28	21	6	3	62

Heart Disease.

Ages . .	Under 20	20—30	30—40	40—50	50—70	All Ages.
Deaths in the Year 1842	9	29	25	34	22	120
Patients suffering from Heart Disease, according to the enumeration	10	17	12	11	5	48

Discrepancies of a trifling amount which appear in Tables II., III., IV., V., and VI., as regards the numbers assigned in each to the same diseases, are explained (in addition to the liability to error) by the uncertainty in classification which arises in a few instances from *complications* of disease, and in others from records which are vague or imperfect. Besides, the form which has been employed was drawn up for the *causes of death*, and is not equally adapted for *diseases of the living.*

The tables which are here brought together, must be regarded rather in the light of materials placed in a convenient relation to each other for the purposes of comparison, than as leading to any broad inference, or as being in themselves sufficient for the establishment of any important truths. Such materials often derive an unexpected value from some inquiry which does not spring directly out of them. It is in this way that the labours of the Hospital Statistic Committee may be expected to prove useful. In bringing those labours to a close, the Committee have to offer their best acknowledgments to those hospital physicians and surgeons who have assisted them; and they trust that, by showing the possibility of combining the valuable information afforded by the several public hospitals, they may have paved the way for some future arrangements by which the knowledge to be derived from these valuable schools of experience may be recorded, collected, and digested.

TABLE II.—*Classification according to Age and Disease.*

MALES.

DISEASES.	1	3	5	10	15	20	25	30	35	40	45	50	55	60	70	?	Total.
Small Pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlatina	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Hooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thrush	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhœa	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	3
Dysentery	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	3
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ague	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	
Remittent Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhus	..	..	1	4	6	4	4	..	1	4	..	1	..	..	..	1	26
Erysipelas	..	..	1	..	1	2	3	3	5	2	2	..	1	..	..	..	20
Syphilis	..	..	..	..	15	50	42	23	6	3	..	1	1	1	..	1	143
Hydrophobia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	2	5	22	56	50	29	13	9	4	2	2	1	..	2	197
Cephalitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Apoplexy	..	..	..	..	..	..	..	1	..	..	3	2	..	1	..	..	7
Paralysis	..	1	..	..	1	..	2	4	4	6	6	3	..	1	..	1	29
Convulsions	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Delirium Tremens	..	..	..	..	..	1	..	..	2	..	..	1	..	..	..	..	4
Chorea	..	..	1	4	2	..	..	..	..	..	..	..	..	..	..	..	7
Epitepsy and Hysteria	..	..	..	..	2	3	1	..	1	2	..	..	..	1	..	..	10
Ear (disease of)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Eye (disease of)	..	..	..	4	6	10	9	5	5	2	2	2	1	2	..	..	48
Brain, &c. (disease of)	..	..	..	..	..	1	2	2	6	1	..	3	..	1	..	..	16
	..	1	1	8	11	15	14	12	18	11	11	11	1	6	..	1	121
Laryngitis	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	2
Quinsey	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	2
Bronchitis	..	..	..	1	3	..	6	4	8	6	6	3	2	3	1	..	43
Pleurisy	..	..	..	..	..	6	3	..	1	..	1	..	..	..	..	..	11
Pneumonia	..	..	..	1	..	2	2	1	2	..	3	3	..	..	..	..	14
Hydrothorax	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Asthma	..	..	..	..	..	3	2	2	..	2	1	1	1	1	..	..	13
Consumption	..	..	..	..	1	5	5	9	6	1	1	..	..	..	..	..	28
Lungs, &c. (disease of)	..	..	1	..	1	1	..	1	..	..	..	1	..	..	..	..	5
	..	..	1	2	5	18	19	17	17	10	12	9	3	4	1	..	118
Pericarditis	..	..	..	1	1	3	1	2	..	..	1	..	..	..	..	..	9
Aneurism	..	..	..	..	..	..	..	..	1	2	..	..	1	..	..	..	4
Heart, &c. (disease of)	..	..	..	2	1	3	1	5	..	3	2	1	2	1	..	..	21
	..	..	..	3	2	6	2	7	1	5	3	1	3	1	..	..	34
Teething	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gastritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteritis	..	..	1	1	1	..	..	..	..	..	..	1	..	..	..	..	4
Peritonitis	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Worms	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ascites	..	..	..	..	..	..	1	1	2	..	..	2	..	1	..	..	7
Ulceration	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hernia	..	..	..	..	..	1	..	..	..	1	1	..	1	..	..	..	4
Colic or Ileus	..	..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	4
Intussusception	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Stricture	..	..	..	..	..	..	1	1	..	..	1	2	..	1	..	..	6
Hæmatemesis	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	2
Stomach, &c. (disease of)	..	..	..	..	1	6	1	1	5	4	1	..	2	2	..	..	23
Pancreas (disease of)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hæpatitis	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	2
Jaundice	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	2
Liver (disease of)	..	..	..	..	..	..	..	..	3	..	1	..	1	..	..	..	5
Spleen (disease of)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	1	2	4	10	3	3	13	5	6	5	4	4	..	..	60

TABLE II.—*continued.*

MALES.

DISEASES.	1	3	5	10	15	20	25	30	35	40	45	50	55	60	70	?	Total.
Nephritis	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Ischuria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diabetes	..	..	..	..	1	1	1	3	2	1	..	..	..	..	..	..	9
Cystitis	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
Stone	1	2	1	2	..	1	..	..	..	1	1	1	1	3	..	..	14
Stricture	..	..	..	..	1	4	4	8	5	5	4	3	1	4	1	..	40
Kidneys, &c. (disease of)	..	..	..	..	3	4	3	1	4	3	1	2	..	3	1	..	25
	1	2	1	2	5	10	8	13	11	10	6	6	2	11	2	..	90
Testes, &c. (disease of)	..	..	..	2	2	..	4	2	2	..	2	1	..	2	2	..	19
Arthritis	..	..	..	..	1	2	..	2	2	2	1	..	..	..	..	..	10
Rheumatism	..	..	..	5	12	9	15	13	14	5	9	6	10	2	1	..	101
Joints, &c. (disease of)	..	2	16	16	25	17	10	9	14	9	7	12	3	6	1	..	147
	..	2	16	21	38	28	25	24	30	16	17	18	13	8	2	..	258
Carbuncle	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	2
Phlegmon	1	..	1	1	2	6	..	1	1	..	2	2	..	2	1	..	20
Ulcer	..	..	..	..	4	12	10	13	8	16	7	6	2	4	3	..	85
Fistula	..	..	..	..	1	..	1	1	1	..	1	1	1	..	..	..	7
Skin, &c. (disease of)	..	3	3	6	1	4	3	4	1	1	1	..	2	1	1	..	31
	1	3	4	7	8	22	15	19	11	17	11	9	5	8	5	..	145
Inflammation	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hæmorrhage	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Dropsy	..	..	1	..	..	..	2	..	1	2	4	2	..	..	..	..	12
Abscess	1	..	..	..	3	3	4	2	1	1	3	1	..	..	..	..	19
Mortification	..	..	..	..	..	..	1	1	1	..	..	..	..	2	..	..	5
Purpura	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	3
Scrofula	..	1	2	8	5	1	3	..	..	..	..	..	..	..	..	..	20
Carcinoma	..	..	1	1	..	..	..	..	..	4	1	1	1	2	..	..	11
Tumor	..	..	..	..	..	..	..	..	..	1	1	2	1	1	..	..	6
Gout	..	..	..	..	..	1	1	1	1	2	..	..	1	..	..	..	7
Atrophy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Debility	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Malformations	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	4
Enlargement of the Glands	..	..	1	..	..	2	2	1	1	..	..	1	..	1	..	..	9
	1	1	6	11	11	8	13	5	6	11	9	7	3	6	..	..	98
Wounds	..	..	2	5	7	6	5	7	3	5	4	5	4	2	1	..	61
Burns and Scalds	1	4	4	1	4	2	2	1	..	..	..	..	..	..	1	..	20
Fractures, Contusions, and Dislocations	1	4	9	12	23	20	22	28	16	37	24	14	9	13	4	..	236
	2	8	15	18	34	28	29	36	24	42	28	19	13	15	6	..	317
Causes not specified	1	1	1	1	7	4	5	6	..	2	2	..	1	..	..	3	34
Total	6	18	48	82	149	205	187	173	146	138	111	88	50	66	18	6	1491

TABLE III.—*Classification according to Age and Disease.*

FEMALES.

DISEASES.	1	3	5	10	15	20	25	30	35	40	45	50	55	60	70	?	Total.
Small Pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlatina	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	3
Hooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thrush	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Diarrhœa	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Dysentery	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	2
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ague	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	3
Remittent Fever	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Typhus	..	..	..	2	6	6	5	1	1	1	..	..	..	..	..	..	22
Erysipelas	..	..	..	..	..	2	4	3	1	3	..	1	..	..	..	..	14
Syphilis	..	..	..	..	66	50	10	9	2	4	1	..	1	..	..	3	146
Hydrophobia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	1	3	73	59	23	14	4	10	1	1	1	..	..	3	193
Cephalitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydrocephalus	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Apoplexy	..	..	..	..	..	.	..	..	3	..	..	..	..	..	..	..	3
Paralysis	..	..	1	1	1	..	1	2	5	5	..	4	1	..	1	..	22
Convulsions	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Delirium Tremens	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chorea	..	1	6	9	7	..	1	..	..	..	..	..	..	..	..	..	24
Epilepsy and Hysteria	..	..	..	1	8	12	11	7	..	..	..	..	..	..	..	..	39
Ear (disease of)	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	2
Eye (disease of)	..	..	1	3	2	7	4	1	1	2	1	..	1	1	..	..	24
Brain, &c. (disease of)	..	..	..	..	3	3	1	..	..	1	..	..	..	1	1	..	10
	1	1	9	14	22	22	18	10	9	8	1	4	2	2	2	..	125
Laryngitis	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	3
Quinsey	..	..	1	..	1	1	1	..	..	..	..	..	..	..	..	.	4
Bronchitis	..	..	1	1	3	2	2	1	2	2	4	2	..	..	1	..	21
Pleurisy	..	..	..	..	2	..	1	..	1	..	..	..	..	..	..	..	4
Pneumonia	..	..	..	..	2	..	..	..	1	1	1	..	1	..	..	..	6
Hydrothorax	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Asthma	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2
Consumption	..	..	..	2	1	9	9	4	2	3	1	1	1	1	..	..	34
Lungs, &c. (disease of)	..	..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	3
	1	..	2	3	9	14	14	5	7	6	7	4	3	1	1	..	77
Pericarditis	..	..	..	1	1	2	1	..	..	..	..	..	..	..	..	..	5
Aneurism	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	2
Heart, &c. (disease of)	..	..	..	..	..	4	9	4	3	2	4	1	..	..	..	..	27
	..	..	..	1	1	6	10	5	3	2	5	1	..	..	..	..	34
Teething	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gastritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteritis	..	..	..	1	1	1	2	..	..	1	1	..	..	..	..	..	7
Peritonitis	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Worms	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Ascites	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	2
Ulceration	..	..	.	..	..	.	..	..	..	..	..	..	..	..	..	..	..
Hernia	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	3
Colic or Ileus	..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..	4
Intussusception	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Stricture	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	2
Hæmatemesis	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	3
Stomach, &c. (disease of)	..	..	..	..	3	10	5	3	4	2	..	1	1	..	..	..	29
Pancreas (disease of)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hepatitis	..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	1
Jaundice	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	5
Liver (disease of)	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	.	3
Spleen (disease of)	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	3
	..	..	1	1	8	17	8	9	6	5	3	2	3	..	..	..	62

TABLE III.—*continued.*

FEMALES.

DISEASES.	1	3	5	10	15	20	25	33	35	40	45	50	55	60	70	?	Total.
Nephritis	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	2
Ischuria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diabetes	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
Cystitis	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Stone	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Stricture	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Kidneys, &c. (disease of)	..	..	..	..	2	2	2	..	..	2	..	2	..	..	..	..	10
	..	..	..	..	3	3	2	2	1	3	..	2	..	..	..	..	16
Childbirth	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	2
Paramenia	..	..	..	1	18	15	9	5	..	2	2	1	..	..	..	..	53
Ovarian dropsy	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	2
Uterus, &c.	..	..	..	..	1	7	8	3	3	5	2	..	1	..	..	..	30
	..	..	..	1	19	22	18	10	3	7	4	2	1	..	..	..	87
Arthritis	..	..	..	..	4	8	7	2	..	1	..	..	1	..	..	..	23
Rheumatism	..	..	..	1	17	20	19	12	6	7	3	4	2	1	..	..	92
Joints, &c. (disease of)	..	2	13	10	17	20	13	4	4	4	2	1	1	..	..	..	91
	..	2	13	11	38	48	39	18	10	12	5	5	4	1	..	..	206
Carbuncle	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2
Phlegmon	..	..	..	..	5	1	1	..	..	1	..	1	..	1	..	..	10
Ulcer	..	..	1	3	7	11	8	9	6	2	4	5	2	3	1	1	63
Fistula	..	..	..	..	..	..	3	2	1	..	..	..	..	..	..	..	6
Skin, &c. (disease of)	..	..	5	4	7	7	5	4	3	1	..	1	2	2	..	..	41
	..	..	6	7	20	19	18	15	10	4	4	7	4	6	1	1	122
Inflammation	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Hæmorrhage	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dropsy	..	..	..	..	2	1	..	2	1	1	..	..	..	1	..	..	8
Abscess	..	..	1	2	5	3	..	1	..	2	..	..	..	..	..	..	14
Mortification	..	..	..	..	..	1	..	..	1	2	..	..	..	2	..	..	6
Purpura	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scrofula	..	1	6	2	5	1	3	..	1	1	..	..	..	..	..	..	20
Carcinoma	..	..	..	..	..	1	1	3	3	2	..	5	1	4	..	..	20
Tumor	..	..	1	..	..	2	2	..	..	..	1	..	..	..	..	..	6
Gout	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Atrophy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Debility	..	..	..	..	5	4	1	..	..	1	..	..	1	..	..	..	12
Malformations	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	2
Enlargement of the Glands	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
	..	1	8	5	19	14	7	6	6	9	1	5	2	7	..	..	90
Wounds	..	..	..	..	1	..	1	1	..	1	..	..	1	..	1	..	6
Burns and Scalds	2	5	7	3	1	4	1	2	..	2	..	..	..	1	..	..	28
Fractures, Contusions, and Dislocations	..	1	1	4	4	6	9	5	4	6	8	12	1	11	6	..	78
	2	6	8	7	6	10	11	8	4	9	8	12	2	12	7	..	112
Causes not specified	..	..	2	..	4	4	1	3	1	1	1	..	1	..	..	..	18
Total	4	10	50	53	222	238	169	105	64	76	40	45	23	29	11	4	1143

TABLE IV.—*Classification according to Age and Disease.*

MALES AND FEMALES.

DISEASES.	1—3	3—5	5—10	10—15	15—20	20—25	25—30	30—35	35—40	40—45	45—50	50—55	55—60	60—70	70+	?	All Ages.
Small Pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlatina	..	..	..	1	..	..	2	1	..	..	..	..	..	..	..	..	4
Hooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Croup	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..
Thrush	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Diarrhœa	..	..	..	1	..	..	..	1	1	..	1	..	..	..	..	..	4
Dysentery	..	..	..	..	..	..	2	2	..	1	..	..	..	..	..	..	5
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ague	..	..	..	..	1	1	1	..	..	..	1	..	..	..	..	..	4
Remittent Fever	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Typhus	..	..	1	6	12	10	9	1	2	5	..	1	..	..	..	1	48
Erysipelas	..	..	1	..	1	4	7	6	6	5	2	1	1	.	..	..	34
Syphilis	..	..	..	..	81	100	52	32	8	7	1	1	2	1	..	4	289
Hydrophobia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	3	8	95	115	73	43	17	19	5	3	3	1	..	5	390
Cephalitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydrocephalus	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Apoplexy	..	..	..	..	..	..	..	1	3	..	3	2	..	1	..	..	10
Paralysis	..	1	1	1	2	..	3	6	9	11	6	7	1	1	1	1	51
Convulsions	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Delirium Tremens	..	..	..	..	..	1	..	..	2	..	..	1	..	..	..	..	4
Chorea	..	1	7	13	9	..	1	..	..	..	..	..	..	..	..	..	31
Epilepsy and Hysteria	..	..	..	1	10	15	12	7	1	2	..	..	..	1	..	..	49
Ear (disease of)	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	2
Eye (disease of)	..	..	1	7	8	17	13	6	6	4	3	2	2	3	..	..	72
Brain, &c. (disease of)	..	..	..	..	3	4	3	2	6	2	..	3	..	2	1	..	26
	1	2	10	22	33	37	32	22	27	19	12	15	3	8	2	1	246
Laryngitis	1	..	..	..	..	..	..	..	1	1	1	1	..	..	..	..	5
Quinsey	..	..	1	..	1	2	2	..	..	..	..	..	..	..	..	..	6
Bronchitis	..	..	1	2	6	2	8	5	10	8	10	5	2	3	2	..	64
Pleurisy	..	..	..	..	2	6	4	..	2	..	1	..	..	..	..	..	15
Pneumonia	..	..	..	1	2	2	2	1	3	1	4	3	1	..	..	..	20
Hydrothorax	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Asthma	..	..	..	..	..	3	2	2	..	2	1	2	2	1	..	..	15
Consumption	..	..	..	2	2	14	14	13	8	4	2	1	1	1	..	..	62
Lungs, &c. (disease of)	..	..	1	..	1	3	1	1	..	..	..	1	..	..	..	..	8
	1	..	3	5	14	32	33	22	24	16	19	13	6	5	2	..	195
Teething	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gastritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteritis	..	..	1	2	2	1	2	..	..	1	1	1	..	..	..	..	11
Peritonitis	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	2
Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Worms	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Ascites	..	..	..	..	..	..	1	1	3	..	..	3	..	1	..	..	9
Ulceration	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hernia	..	..	..	..	..	1	..	..	..	2	2	..	2	..	..	..	7
Colic or Ileus	..	..	..	..	2	2	..	2	2	..	..	..	..	..	..	..	8
Intussusception	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Stricture	..	..	..	..	..	1	1	1	..	1	1	2	..	1	..	..	8
Hæmatemesis	..	..	..	..	1	4	..	..	..	..	..	..	..	..	..	..	5
Stomach, &c.	..	..	..	..	4	16	6	4	9	6	1	1	3	2	..	..	52
Pancreas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hepatitis	..	..	..	..	1	1	..	..	..	..	1	..	..	..	..	..	3
Jaundice	..	..	..	..	2	1	..	1	2	..	1	..	..	..	..	..	7
Liver	..	..	..	..	..	..	..	1	3	..	2	..	2	..	..	..	8
Spleen	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	2
	..	..	2	3	12	27	11	12	19	10	9	7	7	4	..	..	123

TABLE IV.—*continued.*

DISEASES.	MALES AND FEMALES.																All Ages.
	1—3	3—5	5—10	10—15	15—20	20—25	25—30	30—35	35—40	40—45	45—50	50—55	55—60	60—70	70+	?	
Pericarditis	..	..	..	2	2	5	2	2	..	..	1	..	..	..	..	..	14
Aneurism	..	..	..	..	..	..	..	1	1	2	1	..	1	..	..	..	6
Heart, &c. (disease of)	..	..	..	2	1	7	10	9	3	5	6	2	2	1	..	..	48
	..	..	..	4	3	12	12	12	4	7	8	2	3	1	..	..	68
Nephritis	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	3
Ischuria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diabetes	..	..	..	..	2	1	1	3	2	1	..	..	..	..	..	..	10
Cystitis	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	2
Stone	1	2	1	2	..	1	..	1	..	1	1	1	1	3	..	..	15
Stricture	..	..	..	..	1	4	4	9	5	5	4	3	1	4	1	..	41
Kidneys, &c. (disease of)	..	..	..	..	5	6	5	1	4	5	1	4	..	3	1	..	35
	1	2	1	2	8	13	10	15	12	13	6	8	2	11	2	..	106
Childbirth	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	2
Paramenia	..	..	..	1	18	15	9	5	..	2	2	1	..	..	..	..	53
Ovarian dropsy	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	2
Testes, &c. (disease of)	..	..	..	2	3	7	12	5	5	5	4	1	1	2	2	..	49
	..	..	..	3	21	22	22	12	5	7	6	3	1	2	2	..	106
Arthritis	..	..	..	..	5	10	7	4	2	3	1	..	1	..	..	..	33
Rheumatism	..	..	..	6	29	29	34	25	20	12	12	10	12	3	1	..	193
Joints, &c. (disease of)	..	4	29	26	42	37	23	13	18	13	9	13	4	6	1	..	238
	..	4	29	32	76	76	64	42	40	28	22	23	17	9	2	..	464
Carbuncle	..	..	..	..	1	..	2	..	..	..	..	..	..	1	..	..	4
Phlegmon	1	..	1	1	7	7	1	1	1	1	2	3	..	3	1	..	30
Ulcer	..	..	1	3	11	23	18	22	14	18	11	11	4	7	4	1	148
Fistula	..	..	..	..	1	..	4	3	2	..	1	1	1	..	..	..	13
Skin, &c. (disease of)	..	3	8	10	8	11	8	8	4	2	1	1	4	3	1	..	72
	1	3	10	14	28	41	33	34	21	21	15	16	9	14	6	1	267
Inflammation	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Hæmorrhage	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Dropsy	..	..	1	..	2	1	2	2	2	3	4	2	..	1	..	..	20
Abscess	1	..	1	2	8	6	4	3	1	3	3	1	..	..	..	..	33
Mortification	..	..	..	..	..	1	1	1	2	2	..	..	..	4	..	..	11
Purpura	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	..	3
Scrofula	..	2	8	10	10	2	6	..	1	1	..	..	..	..	..	..	40
Enlarged Glands	..	..	1	..	1	2	2	1	1	..	..	1	..	1	..	..	10
Carcinoma	..	..	1	1	..	1	1	3	3	6	1	6	2	6	..	..	31
Tumor	..	..	1	..	..	2	2	..	..	1	2	2	1	1	..	..	12
Gout	..	..	..	..	..	1	1	1	1	2	..	..	1	..	..	..	7
Atrophy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Debility	..	..	..	..	5	5	1	..	..	1	..	..	1	..	..	..	13
Malformations	..	..	1	2	3	..	..	.	..	..	..	..	..	..	..	..	6
	1	2	14	16	30	22	20	11	12	20	10	12	5	13	..	..	188
Wounds	..	..	2	5	8	6	6	8	8	6	4	5	5	2	2	..	67
Burns and Scalds	3	9	11	4	5	6	3	3	..	2	..	..	..	1	1	..	48
Fractures, Contusions, &c.	1	5	10	16	27	26	31	33	20	43	32	26	10	24	10	..	314
	4	14	23	25	40	38	40	44	28	51	36	31	15	27	13	..	429
Diseases not specified	1	1	3	1	11	8	6	9	1	3	3	..	2	..	..	3	52
Total	10	28	98	135	371	443	356	278	210	214	151	133	73	95	29	10	2634

TABLE V.—*Patients Classified according to Disease and Length of Time in Hospital.*

DISEASES.	WEEKS.				MONTHS.												Total.
	Under 1 Week.	1 and under 2.	2 and under 3.	3 and under 4.	1—1½	1½—2	2—3	3—4	4—5	5—6	6—9	9—12	12—18	18—24	24 +	?	
Small Pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlatina	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Hooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thrush	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
Diarrhœa	..	1	..	2	..	..	1	..	..	..	..	..	..	..	..	..	4
Dysentery	..	1	..	..	1	2	..	1	..	..	..	..	..	..	..	..	5
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ague	2	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	4
Remittent Fever	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Typhus	4	13	5	8	14	3	2	..	..	..	..	..	..	..	..	..	49
Erysipelas	3	8	2	3	4	4	3	2	2	..	..	..	..	..	..	..	31
Syphilis	44	47	33	29	43	43	28	10	3	1	3	..	1	..	..	2	287
Hydrophobia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	55	71	41	43	63	52	34	13	5	1	3	..	1	1	..	2	385
Cephalitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydrocephalus	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
Apoplexy	1	2	2	..	2	1	1	..	..	..	..	1	..	..	..	..	10
Paralysis	5	4	3	5	11	5	7	5	..	2	3	1	..	..	..	..	51
Convulsions	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Delirium Tremens	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
Chorea	4	4	2	5	5	6	2	3	..	..	..	..	..	..	..	..	31
Epilepsy and Hysteria	6	8	7	3	7	6	5	2	..	1	..	2	..	..	..	..	47
Ear (disease of)	..	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..	3
Eye (disease of)	8	13	6	5	10	8	8	5	2	2	2	1	1	..	..	..	71
Brain &c. (disease of)	4	3	5	3	3	5	1	2	1	..	..	..	..	..	..	..	27
	31	35	25	21	41	31	25	17	3	5	5	5	1	..	..	..	245
Laryngitis	1	1	..	..	..	..	3	..	..	..	..	..	..	..	..	..	5
Quinsey	4	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	7
Bronchitis	17	15	7	7	7	9	3	..	..	..	..	..	..	..	..	1	66
Pleurisy	1	3	..	1	3	1	2	1	1	..	1	..	..	1	..	..	15
Pneumonia	5	1	1	1	7	3	1	1	..	..	..	..	..	..	..	..	20
Hydrothorax	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Asthma	2	5	..	..	2	2	4	..	..	..	..	..	..	..	..	..	15
Consumption	8	14	2	6	11	7	8	3	3	..	..	..	1	..	..	..	63
Lungs, &c. (disease of)	2	1	2	2	1	..	..	1	..	..	..	..	..	..	..	..	9
	40	42	12	17	31	22	22	6	4	..	1	..	1	1	..	1	200
Teething	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gastritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteritis	..	1	4	..	1	3	2	..	..	..	..	..	1	..	..	..	12
Peritonitis	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Worms	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Ascites	2	2	1	..	3	..	..	..	..	..	..	..	..	..	..	..	8
Ulceration	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hernia	1	3	..	..	3	..	..	..	..	..	..	..	..	..	..	..	7
Colic or Ileus	..	2	1	..	1	1	2	..	..	1	..	..	..	..	..	..	8
Intussusception	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Stricture	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	3
Hæmatemesis	..	1	..	1	3	..	..	..	..	..	..	..	..	..	..	..	5
Stomach, &c. (disease of)	5	5	6	7	14	7	2	2	..	1	1	..	..	..	..	..	50
Pancreas (disease of)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hepatitis	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	3
Jaundice	4	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	7
Liver (disease of)	1	1	2	2	..	..	2	..	1	..	..	..	..	..	..	..	9
Spleen (disease of)	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2
	16	17	16	10	29	13	8	2	2	2	1	..	1	..	..	..	117

TABLE V.—*continued.*

DISEASES.	WEEKS.				MONTHS.												Total.
	Under 1 Week.	1 and under 2.	2 and under 3.	3 and under 4.	1 — 1¼	1¼ — 2	2 — 3	3 — 4	4 — 5	5 — 6	6 — 9	9 — 12	12 — 18	18 — 24	24 +	?	
Pericarditis	..	4	3	..	5	2	..	1	..	..	..	..	..	..	..	..	15
Aneurism	..	..	..	1	1	..	3	..	1	..	1	..	..	..	..	..	7
Heart, &c. (disease of)	5	12	3	7	6	4	2	4	2	..	2	..	1	..	..	..	48
	5	16	6	8	12	6	5	5	3	..	3	..	1	..	..	..	70
Nephritis	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	3
Ischuria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diabetes	..	1	..	..	1	2	2	3	1	1	..	..	..	..	..	..	11
Cystitis	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	2
Stone	3	1	..	2	6	..	..	2	1	..	..	..	..	..	..	..	15
Stricture	11	5	5	2	8	5	6	1	2	..	..	1	..	..	..	..	46
Kidneys, &c. (disease of)	4	2	5	4	6	5	5	2	2	..	..	..	..	..	..	..	35
	19	9	11	8	21	13	13	10	6	1	..	1	..	..	..	..	112
Childbirth	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2
Paramenia	6	8	9	7	11	5	4	1	4	..	1	..	1	..	..	..	57
Ovarian Dropsy	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	2
Organs of Generation (disease of)	5	5	4	7	10	7	5	1	2	..	..	..	2	..	2	1	51
	12	13	13	15	21	13	9	2	6	..	1	..	3	1	2	1	112
Arthritis	7	4	5	7	3	4	6	2	..	..	..	..	..	..	..	..	38
Rheumatism	32	28	33	20	25	19	24	4	3	..	2	..	..	..	..	..	190
Joints, &c. (disease of)	20	30	24	19	28	17	24	14	16	10	19	9	1	..	2	1	234
	59	62	62	46	56	40	54	20	19	10	21	9	1	..	2	1	462
Carbuncle	1	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	3
Phlegmon	5	2	2	3	7	2	2	3	..	..	..	..	1	..	..	..	27
Ulcer	11	21	17	17	30	19	16	5	5	2	4	..	..	..	..	1	148
Fistula	..	1	2	1	3	1	3	1	..	1	..	..	..	..	..	..	13
Skin, &c. (disease of)	5	15	9	6	11	10	9	3	..	..	1	2	1	..	1	1	74
	22	40	30	27	52	32	30	12	5	3	5	2	2	..	1	2	265
Inflammation	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2
Hæmorrhage	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Dropsy	2	3	2	2	4	2	3	1	1	..	..	..	..	..	..	..	20
Abscess	3	5	6	5	5	1	3	2	2	..	..	..	..	..	..	..	32
Mortification	2	1	1	2	2	1	1	..	..	..	1	..	..	..	..	..	11
Purpura	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	3
Scrofula	5	3	7	5	8	3	2	2	1	1	2	..	..	..	..	..	39
Carcinoma	2	7	1	..	10	2	4	..	3	..	..	2	..	..	..	..	31
Tumor	1	1	3	..	1	1	3	..	..	..	..	..	..	..	..	..	10
Gout	1	..	1	..	3	1	..	..	1	..	..	..	..	..	..	..	7
Atrophy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Debility	2	4	2	1	3	..	1	..	..	..	..	..	..	..	..	..	13
Malformations	1	..	1	1	..	..	..	1	1	..	1	..	..	..	..	..	6
Enlargement of the Glands	1	2	3	2	1	..	..	..	..	..	..	1	..	..	..	..	10
	20	28	29	18	39	11	17	6	9	1	4	3	.	..	.	..	185
Wounds	8	14	10	6	6	10	4	6	..	2	1	..	..	..	..	..	67
Burns and Scalds	3	10	8	6	7	3	8	1	2	1	..	..	..	..	..	..	49
Fractures, Contusions, and Dislocations	35	47	63	40	45	34	21	14	8	4	2	..	..	..	..	1	314
	46	71	81	52	58	47	33	21	10	7	3	..	..	..	..	1	430
Diseases not specified	3	2	3	3	4	2	15	10	1	3	5	..	..	..	..	..	51
Total	328	406	329	268	427	282	265	124	73	33	52	20	11	3	5	8	2,634

TABLE VI.—*Patients Classified according to Disease and Duration of Illness.*

DISEASES.	WEEKS.				MONTHS.						YEARS.									Total.
	Under 1 Week.	1 and under 2.	2 and under 3.	3 and under 4.	1—1½	1½—2	2—3	3—6	6—9	9—12	1—1½	1½—2	2—3	3—4	4—5	5—10	10—15	15+	?	
Small Pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlatina	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Hooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thrush	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Diarrhœa	..	..	..	1	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	4
Dysentery	..	..	..	.	..	..	..	1	2	..	1	..	..	..	..	..	..	..	1	5
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza	..	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..	..	..
Ague	..	..	.	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	1	4
Remittent Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Typhus	..	4	4	8	14	5	6	1	1	..	..	..	..	.	..	..	..	..	6	49
Erysipelas	..	5	4	2	6	2	1	8	1	..	..	..	..	..	2	..	..	..	2	33
Syphilis	..	3	6	3	29	26	56	85	27	10	14	2	9	3	2	2	2	..	12	291
Hydrophobia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	1	13	14	15	50	33	64	96	33	10	15	3	10	3	4	2	2	..	23	391
Cephalitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Apoplexy	..	..	1	2	2	..	..	2	..	1	..	..	..	1	..	1	..	..	..	10
Paralysis	..	1	1	1	4	4	5	11	3	6	3	1	3	3	..	3	..	..	1	50
Convulsions	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Delirium Tremens	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3
Chorea	..	..	..	..	1	4	8	9	2	2	..	..	..	..	1	..	..	..	3	30
Epilepsy and Hysteria	..	1	1	2	2	3	7	6	..	3	2	2	3	5	1	2	4	..	3	47
Ear (disease of)	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	3
Eye (disease of)	1	..	2	4	9	3	4	9	8	1	5	2	4	2	..	8	..	1	7	70
Brain, &c. (disease of)	..	1	..	1	1	2	5	4	3	2	4	..	1	..	..	1	..	..	2	27
	1	3	7	10	19	16	30	41	16	16	14	5	12	11	2	15	4	1	18	241
Laryngitis	..	..	..	..	..	..	..	2	..	1	1	..	..	..	..	..	..	..	1	5
Quinsey	..	2	..	1	1	..	..	1	..	..	1	..	..	..	..	..	..	..	1	7
Bronchitis	..	3	5	4	6	4	9	18	1	1	2	1	..	2	1	3	..	1	4	65
Pleurisy	..	1	2	..	2	..	3	2	1	1	..	2	..	..	..	..	..	..	1	15
Pneumonia	1	..	1	..	1	3	5	3	2	1	..	..	1	..	..	..	..	..	2	20
Hydrothorax	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Asthma	..	..	1	..	..	..	..	4	..	..	2	1	3	1	1	2	..	..	..	15
Consumption	..	..	..	1	2	..	6	19	12	5	3	1	5	2	1	..	1	1	4	63
Lungs, &c. (disease of)	..	..	1	1	2	..	..	2	..	1	..	..	1	..	..	..	..	..	1	9
	1	6	10	7	14	7	23	51	16	10	9	5	10	5	3	5	1	2	14	199
Teething	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gastritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteritis	..	..	..	2	1	1	3	3	..	..	1	1	..	..	..	..	..	..	..	12
Peritonitis	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Worms	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Ascites	..	..	1	..	1	..	1	2	1	..	..	..	..	1	..	..	..	..	1	8
Ulceration	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hernia	..	2	..	..	2	..	..	..	1	..	..	..	..	..	..	..	..	1	1	7
Colic or Ileus	..	..	..	..	..	..	..	2	2	..	..	1	..	..	..	..	1	..	2	8
Intussusception	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Stricture	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	1	..	1	5
Hæmatemesis	..	..	..	..	2	1	1	..	..	..	..	..	..	..	..	..	..	..	1	5
Stomach, &c. (disease of)	..	..	..	..	1	3	1	8	10	7	7	..	2	3	..	3	..	2	5	52
Pancreas (disease of)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hepatitis	1	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	3
Jaundice	..	..	..	..	1	..	1	3	1	..	..	..	..	..	..	..	..	..	1	7
Liver (disease of)	..	..	..	..	1	1	2	..	2	..	..	1	..	..	1	..	..	..	1	9
Spleen (disease of)	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	2
	2	2	2	2	10	6	9	21	18	7	9	3	3	5	1	3	2	3	13	121

TABLE VI.—*continued.*

DISEASES.	WEEKS.				MONTHS.						YEARS.									Total.
	Under 1 Week.	1 and under 2.	2 and under 3.	3 and under 4.	1—1½	1½—2	2—3	3—6	6—9	9—12	1—1½	1½—2	2—3	3—4	4—5	5—10	10—15	15+	?	
Pericarditis	..	..	4	..	4	2	2	2	..	..	..	..	..	..	..	1	..	..	..	15
Aneurism	..	..	..	..	..	..	..	..	1	2	1	1	..	..	1	1	..	..	..	7
Heart, &c. (disease of)	..	..	1	1	3	3	4	9	5	1	8	5	5	1	2	..	1	..	..	49
	..	..	5	1	7	5	6	11	6	3	9	6	5	1	3	2	1	..	..	71
Nephritis	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1	3
Ischuria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diabetes	..	..	..	..	..	..	..	2	1	1	4	1	1	..	..	..	..	..	1	11
Cystitis	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	2
Stone	..	1	..	..	..	..	..	1	..	1	1	..	1	3	1	3	3	..	..	15
Stricture	1	..	1	..	1	2	3	3	2	1	5	..	2	4	4	6	1	3	4	43
Kidneys, &c. (disease of)	..	..	1	1	3	3	2	8	4	3	2	1	3	2	..	..	..	..	..	33
	1	1	2	1	5	5	6	14	7	6	13	2	7	9	6	9	4	3	6	107
Childbirth	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Paramenia	..	1	..	1	3	1	2	16	8	2	5	1	1	1	..	4	1	..	7	54
Ovarian Dropsy	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2
Organs of Generation (disease of)	2	1	1	..	..	1	10	9	5	1	3	2	1	3	1	6	2	1	..	49
	2	2	1	1	5	2	12	26	13	3	8	3	3	4	1	10	3	1	7	107
Arthritis	..	..	2	2	5	1	7	4	1	2	2	..	4	1	1	..	..	..	4	36
Rheumatism	2	4	10	11	29	17	36	38	16	2	6	..	6	..	..	..	3	..	13	193
Joints, &c. (disease of)	1	2	4	4	9	12	12	42	25	24	31	14	23	8	5	10	4	1	6	237
	3	6	16	17	43	30	55	84	42	28	39	14	33	9	6	10	7	1	23	466
Carbuncle	..	..	1	..	..	1	..	1	..	..	..	..	..	..	..	..	1	..	..	4
Phlegmon	2	2	2	2	5	5	5	4	..	3	1	1	..	..	..	..	..	..	..	32
Ulcer	2	..	2	..	8	6	20	30	20	5	9	4	11	7	5	5	4	1	9	148
Fistula	..	..	..	..	2	..	..	3	..	2	1	1	2	1	..	1	1	..	..	14
Skin, &c. (disease of)	..	..	..	3	6	3	7	12	7	2	5	1	5	2	3	2	2	3	9	72
	4	2	5	5	21	15	32	50	27	12	16	7	18	10	8	8	8	4	18	270
Inflammation	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Hæmorrhage	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Dropsy	..	..	1	2	..	3	3	6	2	..	..	..	..	1	..	..	..	..	2	20
Abscess	..	2	1	4	2	3	4	7	3	1	1	..	..	..	1	..	..	..	3	32
Mortification	..	..	1	..	1	1	4	..	2	2	..	..	..	..	..	..	..	..	..	11
Purpura	..	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	3
Scrofula	..	..	1	1	1	2	4	3	4	1	4	1	4	5	1	2	1	..	4	39
Carcinoma	..	..	..	..	..	..	..	4	2	1	6	3	11	..	..	2	1	1	2	33
Tumour	..	..	..	..	..	..	..	2	3	..	2	..	..	1	..	1	1	..	1	11
Gout	..	..	1	1	1	..	..	3	..	..	..	..	..	..	1	..	..	..	..	7
Atrophy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Debility	..	..	..	1	2	2	2	3	..	..	2	..	..	..	..	..	..	..	1	13
Malformations	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	3	..	6
Enlargement of the Glands	..	..	1	1	2	..	..	2	1	..	..	1	..	2	..	..	..	..	..	10
	..	2	7	10	12	12	17	31	17	5	15	5	15	9	4	6	4	4	13	188
Wounds	6	11	13	4	9	7	5	8	1	..	..	..	..	..	..	1	..	..	..	65
Burns and Scalds	2	8	10	4	8	2	9	5	..	..	..	..	..	..	..	..	..	..	..	48
Fractures, Contusions, and Dislocations.	25	41	68	39	48	32	18	29	6	1	2	..	1	..	..	1	..	..	2	313
	33	60	91	47	65	41	32	42	7	1	2	..	1	..	..	2	..	..	2	426
Diseases not specified.	1	..	..	..	2	..	2	5	6	6	4	..	7	..	1	2	..	..	11	47
Total	49	97	160	116	253	172	288	472	208	107	153	53	124	66	39	74	36	19	148	2,634

TABLE VII.—*Deaths in the London Hospitals*, 1842;

Age.	0		1		3		5		10		15		20	
Causes of Death.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
All Causes	6	3	20	8	14	15	41	43	37	27	52	48	208	156
Specified Causes	6	3	19	8	14	15	41	43	37	27	52	48	208	155
I. Zymotic (or Epidemic, Endemic, and Contagious) Diseases	..	1	..	..	1	3	3	..	7	4	5	10	24	18
Sporadic Diseases—														
II. of uncertain or variable Seat	1	..	..	1	1	..	7	2	3	4	4	3	25	29
III. of the Nervous System	2	..	3	2	..	1	2	2	4	2	4	5	10	12
IV. of the Respiratory Organs	..	..	..	..	1	1	1	2	3	3	18	12	72	45
V. of the Organs of Circulation	1	..	..	..	..	..	1	1	4	..	3	3	17	13
VI. of the Digestive Organs	..	..	..	..	1	..	..	1	3	1	5	2	11	14
VII. of the Urinary Organs	..	..	..	..	..	..	..	..	3	1	..	1	6	2
VIII. of the Organs of Generation	..	..	..	..	..	..	..	..	..	..	..	..	..	3
IX. of the Organs of Locomotion	..	..	..	..	..	..	6	..	..	2	5	2	13	6
X. of the Integumentary System	..	..	..	..	..	..	..	..	..	..	..	..	1	2
XI. Old Age	..	..	..	..	..	..	..	..	..	..	..	..	..	..
XII. External Causes; — Poisoning, Asphyxia, Injuries	2	2	16	5	10	10	21	35	10	10	8	10	29	11
I. 1. Small Pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Scarlatina	..	..	..	..	..	..	3	..	..	..	..	..	1	3
4. Hooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Croup	..	..	..	..	..	3	..	..	..	..	..	..	..	..
6. Thrush	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Diarrhœa	..	..	..	..	..	..	..	..	..	..	..	..	1	2
8. Dysentery	..	..	..	..	..	..	..	..	..	..	..	..	2	..
9. Cholera	..	..	..	..	..	..	..	..	1	..	..	..	..	..
10. Influenza	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Ague	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12. Remittent Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13. Typhus	..	..	..	..	1	..	..	..	6	4	4	7	16	8
4. Erysipelas	..	..	..	..	..	..	.	..	..	..	..	1	4	1
5. Syphilis	..	1	..	..	..	..	..	..	..	..	1	2	..	4
16. Hydrophobia	..	..	..	..	..	..	..	..	..	..	..	..	..	..
I. 17. Inflammation	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18. Hæmorrhage	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19. Dropsy	..	..	..	..	..	..	4	1	2	1	4	1	16	21
20. Abscess	..	..	..	..	..	..	..	..	..	2	..	1	6	2
21. Mortification	..	..	..	..	..	..	1	..	..	..	..	1	..	4
22. Purpura	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23. Scrofula	..	..	..	1	..	..	1	..	1	1	..	..	3	..
24. Carcinoma	..	..	..	..	..	..	1	1	..	..	..	..	..	..
25. Tumour	..	..	..	..	1	..	..	..	..	..	..	..	..	..
26. Gout	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27. Atrophy	..	..	..	..	..	..	..	..	..	..	..	..	..	..
28. Debility	1	..	..	..	..	..	..	..	..	..	..	..	..	2
29. Malformations	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30. Sudden Deaths	..	..	..	..	..	..	..	..	..	..	..	..	..	..
III. 31. Cephalitis	..	..	1	1	..	..	..	..	..	..	3	..	2	3
32. Hydrocephalus	..	..	2	..	..	1	..	1	1	..	..	..	..	..
33. Apoplexy	..	..	..	..	..	..	1	..	..	..	..	1	1	..
34. Paralysis	..	..	..	..	..	..	..	1	1	..	..	1	..	2
35. Convulsions	2	..	..	..	..	..	..	..	..	..	..	1	..	1
36. Tetanus	..	..	..	..	..	..	..	..	1	..	..	..	..	1
37. Chorea	..	..	..	..	..	..	..	..	..	1	..	1	..	..
38. Epilepsy	..	..	..	..	..	..	..	..	1	..	..	1	1	..
39. Insanity	..	..	..	..	..	..	..	..	..	..	..	..	..	..
40. Delirium Tremens	..	..	..	..	..	..	..	..	..	..	..	..	3	1
41. Brain, &c. (Disease of)	..	..	..	1	..	..	1	..	..	1	1	..	3	4
IV. 42. Laryngitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
43. Quinsey	..	..	..	..	..	1	..	..	..	..	..	..	1	..
44. Bronchitis	..	..	..	..	..	..	..	..	..	..	1	..	6	2
45. Pleurisy	..	..	..	..	..	..	..	..	..	..	..	..	3	1
46. Pneumonia	..	..	..	..	1	..	..	..	1	..	1	1	7	2
47. Hydrothorax	..	..	..	..	..	..	..	..	..	..	..	..	..	1
48. Asthma	..	..	..	..	..	..	..	..	..	..	..	..	..	..

comprising the Sex, Age, and Cause of Death.

30		40		50		60		70		80		90		100		(?)		Total.		Total Males and Females.	Total Deaths in Metropolis.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
271	105	266	103	164	92	92	45	44	24	4	8	..	1	..	..	1	..	1,220	678	1,898	45,400
271	104	265	103	163	92	91	45	44	24	4	8	..	1	..	..	1	..	1,216	676	1,892	45,082
23	8	16	2	6	7	4	3	1	..	..	..	..	..	..	..	..	..	90	56	146	7,696
41	27	41	27	26	34	19	9	5	5	..	1	..	..	..	..	1	..	174	142	316	5,715
25	5	26	6	10	5	5	5	1	2	..	1	..	..	..	..	..	..	92	48	140	7,505
88	30	79	22	56	9	17	7	9	2	..	..	..	..	..	..	..	..	344	133	477	13,990
22	9	23	15	8	5	6	3	..	..	..	..	..	..	..	..	..	..	85	49	134	1,046
15	7	13	7	12	12	4	6	2	3	1	1	..	..	..	..	..	..	67	54	121	3,396
12	2	11	5	13	2	11	..	8	..	1	..	..	..	..	..	..	..	65	13	78	323
..	6	..	4	1	1	1	..	..	..	..	..	..	..	..	..	..	..	2	14	16	445
10	1	7	2	3	1	2	1	1	..	..	..	..	..	..	..	..	..	47	15	62	280
..	..	1	2	1	..	2	1	1	..	..	..	..	..	..	..	..	..	6	5	11	73
..	..	..	..	..	..	2	..	2	1	1	1	..	..	..	..	..	..	5	2	7	3,346
35	9	48	11	27	16	18	10	14	11	1	4	..	1	..	..	..	..	239	145	384	1,267
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	360
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,293
1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	4	9	1,224
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,603
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	438
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	246
2	1	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	6	3	9	704
2	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	5	1	6	151
..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	2	118
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	78
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	20
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	17
12	3	5	..	2	3	..	..	..	..	..	..	..	..	..	..	..	..	46	25	71	1,174
5	3	9	2	1	4	4	2	..	..	..	..	..	..	..	..	..	..	23	13	36	235
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	7	9	31
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	262
1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	3	..	3	156
26	17	30	17	15	20	13	4	2	3	..	..	..	..	..	..	..	..	112	85	197	1,750
4	..	1	1	2	1	..	1	..	..	..	..	..	..	..	..	..	..	13	8	21	136
1	1	1	..	3	..	2	..	1	1	..	1	..	..	..	..	..	..	9	8	17	180
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	16
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	2	8	109
2	7	3	7	3	9	2	4	2	1	..	..	..	..	..	..	..	..	13	29	42	429
2	2	..	1	1	2	1	..	..	..	..	..	..	..	..	..	..	..	5	5	10	86
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	73
1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	457
..	..	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	3	4	7	1,148
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	43
2	..	3	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	6	1	7	870
2	1	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	8	18	595
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	5	1,743
3	..	3	1	3	4	2	2	1	1	..	1	..	..	..	..	..	..	14	10	24	814
4	1	11	1	2	..	1	3	..	1	..	..	..	..	..	..	..	..	19	10	29	776
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	4	2,773
3	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	6	1	7	15
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	4
4	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	9	1	10	190
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	45
2	1	5	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	12	2	14	76
7	2	4	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	17	10	27	474
1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	20
..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	1	3	63
9	3	12	2	9	5	4	3	1	..	..	..	..	..	..	..	..	..	42	15	57	679
1	..	2	1	1	1	1	2	..	..	..	..	..	..	..	..	..	..	8	5	13	75
8	1	10	1	5	..	..	..	1	1	..	..	..	..	..	..	..	..	34	6	40	3,923
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	209
3	..	3	1	2	..	2	..	2	1	..	..	..	..	..	..	..	..	12	2	14	1,109

TABLE VII.—*Deaths in the London Hospitals,* 1842;

	Age.	0		1		3		5		10		15		20	
	Causes of Death.	M.	F.	M.	F.	M.	F.	M	F.	M.	F.	M.	F.	M.	F.
	49. Phthisis (or Consumption)	..	..	..	..	..	..	1	2	1	3	15	10	55	36
	50. Lungs, &c. (Disease of)	..	..	..	..	..	..	..	..	1	..	1	1	..	3
V.	51. Pericarditis	..	..	..	..	..	..	..	..	..	..	..	2	..	..
	52. Aneurism	..	..	..	..	..	..	..	..	..	..	1	..	..	1
	53. Heart, &c. (Disease of)	1	..	..	..	..	..	1	1	4	..	2	1	17	12
VI.	54. Teething	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	55. Gastritis } 56. Enteritis }	..	..	..	..	..	..	..	..	..	..	2	1	1	4
	57. Peritonitis	..	..	..	..	1	..	..	..	..	..	2	..	1	1
	58. Tabes Mesenterica	..	..	..	..	..	..	..	1	..	..	..	..	..	..
	59. Worms	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	60. Ascites	..	..	..	..	..	..	..	..	2	..	..	..	..	..
	61. Ulceration	..	..	..	..	..	..	..	..	..	..	..	..	1	1
	62. Hernia	..	..	..	..	..	..	..	..	1	..	..	..	3	..
	63. Colic, or Ileus	..	..	..	..	..	..	..	..	..	..	..	..	2	1
	64. Intussusception	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	65. Stricture	..	..	..	..	..	..	..	..	..	..	..	..	..	1
	66. Hæmatemesis	..	..	..	..	..	..	..	..	..	..	1	..	1	..
	67. Stomach, &c. (Disease of)	..	..	..	..	..	..	..	..	..	..	..	1	1	1
	68. Pancreas (Disease of)	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	69. Hepatitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	70. Jaundice	..	..	..	..	..	..	..	..	..	..	..	..	1	4
	71. Liver (Disease of)	..	..	..	..	..	..	..	..	..	1	..	..	..	1
	72. Spleen (Disease of)	..	..	..	..	..	..	..	..	..	..	..	..	..	..
VII.	73. Nepthritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	74. Ischuria	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	75. Diabetes	..	..	..	..	..	..	..	..	2	..	..	..	1	..
	76. Cystitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	77. Stone	..	..	..	..	..	..	..	..	1	..	..	..	..	..
	78. Stricture	..	..	..	..	..	..	..	..	..	..	..	..	1	1
	79. Kidneys, &c. (Disease of)	..	..	..	..	..	..	..	..	..	1	..	1	4	1
VIII.	80. Childbirth	..	..	..	..	..	..	..	..	..	..	..	..	..	1
	81. Paramenia	..	..	..	..	..	..	..	..	..	..	..	..	..	1
	82. Ovarian Dropsy	..	..	..	..	..	..	..	..	..	..	..	..	..	1
	83. Organs of Generation (Disease of)	..	..	..	..	..	..	..	..	..	..	..	..	..	..
IX.	84. Arthritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	85. Rheumatism	..	..	..	..	..	..	..	..	..	..	..	1	1	..
	86. Joints, &c. (Disease of)	..	..	..	..	..	..	6	..	..	2	5	1	12	6
X.	87. Carbuncle	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	88. Phlegmon	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	89. Ulcer	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	90. Fistula	..	..	..	..	..	..	..	..	..	..	..	..	1	2
	91. Skin, &c. (Disease of)	..	..	..	..	..	..	..	..	..	..	..	..	..	..
XI.	92. Old Age	..	..	..	..	..	..	..	..	..	..	..	..	..	..
XII.	93. Intemperance	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	94. Starvation	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	95. Violent Deaths	2	2	16	5	10	10	21	35	10	10	8	10	29	11
	Causes not specified	..	..	1	..	..	..	..	..	..	..	..	..	..	1

NOTE.—This Table contains the Deaths in the following Hospitals, viz. St. George's, Charing Cross

comprising the Sex, Age, and Cause of Death.—continued.

30		40		50		60		70		80		90		100		(?)		Total.		Total Males and Females.	Total Deaths in Metropolis.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
63	25	46	16	34	3	8	2	1	..	..	..	..	..	..	..	..	..	224	97	321	7,145
3	1	5	1	5	..	1	..	4	..	..	..	..	..	..	..	..	..	20	6	26	767
2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	5	33
1	2	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	4	9	24
19	6	20	14	8	5	6	3	..	..	..	..	..	..	..	..	..	..	78	42	120	989
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	914
..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	7	10	996
2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	6	2	8	64
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	285
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	17
..	..	3	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	6	31
1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2	3	5	78
2	1	4	3	3	6	..	4	1	3	1	1	..	..	..	..	..	..	15	18	33	93
1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	5	1	6	125
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8
..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2	2	4	21
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3	23
4	3	3	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	12	6	18	193
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	51
1	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	7	9	106
3	1	3	..	3	1	1	1	1	..	..	..	..	..	..	..	..	..	11	5	16	382
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9
..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	19
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
2	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	1	8	20
..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	19
2	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	5	..	5	20
3	..	2	1	11	..	1	..	5	..	1	..	..	..	..	..	..	..	24	2	26	40
5	2	5	3	2	2	8	..	3	..	..	..	..	..	..	..	..	..	27	10	37	200
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	321
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	11
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	14
..	4	..	4	1	1	1	..	..	..	..	..	..	..	..	..	..	..	2	9	11	99
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4	..	4	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	11	2	13	119
6	1	3	2	1	..	2	1	1	..	..	..	..	..	..	..	..	..	36	13	49	161
..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	5
..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2	..	2	3
..	..	..	2	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	3	4	24
..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	4	12
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	29
..	..	..	..	..	..	2	..	2	1	1	1	..	..	..	..	..	..	5	2	7	3,346
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	20
34	9	48	11	27	16	18	10	14	11	1	4	..	1	..	..	..	..	238	145	383	1,225
..	1	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	4	2	6	318

iddlesex, North London, Westminster, St. Bartholomew's, London, Guy's, and St. Thomas's.

A Third Contribution to a Knowledge of the Influence of Employments upon Health. By William Augustus Guy, M.B. Cantab., Professor of Forensic Medicine, King's College, and Physician to King's College Hospital, Hon. Sec., &c.

[*Read before the Statistical Society of London, May 20th,* 1844.]

In the last two numbers of the Journal of the Statistical Society, the influence of employments upon health was illustrated by means of probabilities confessedly open to objection, and still standing in need of confirmation. The ratio of cases of pulmonary consumption to those of all other diseases occurring among the out-patients of a public hospital (the first test employed) was obviously insufficient, inasmuch as that ratio will depend upon the comparative frequency of many diseases of a trivial nature, which may vary with the several employments. This being the case, it has seemed advisable to confirm the probability derived from this source by another probability open to a different class of objections. Such is the ratio of cases of death by consumption to those due to all other causes, as gleaned from the sanitary registers for the year 1839; which registers have been already employed in the latter part of the author's last communication to the Society.

These registers, as has been already stated, are open to the objection that the causes of death are often imperfectly registered. Without intending to lessen the force of this objection, as applying to the greater number of diseases, there is reason to believe that the cases registered as death by consumption, pulmonary consumption, decline, phthisis, &c., above the age of 15, form nearer approximations to the actual facts than almost any other class of diseases, and that, for purposes of comparison, they may be used with some degree of confidence.

The first object of the present Essay is to ascertain whether, and to what extent, the ratio which cases entered under these titles bear to all other diseases, corresponds with the ratio already obtained from the books of the King's College Hospital; for if a close correspondence shall be discovered, it will add great strength to the probability already deduced from the last-named source. Another object is to illustrate a question of considerable interest and importance, for which the hospital registers did not furnish the requisite materials, viz.: whether the several classes of society, the gentry, tradesmen, and working men, are equally liable to attacks of pulmonary consumption? The answer to this question will lead to a consideration of the causes of the unequal prevalence of the disease among the three classes; and this will suggest a further inquiry as to the actual amount of pulmonary consumption in this country; and will originate an attempt to determine the actual waste of human life due to this cause.

It is proposed in this communication to follow as closely as possible the order observed in the Essays already laid before the Society.

The following table shows, for in-door and out-door employments, the per centage proportion of deaths from pulmonary consumption at different ages, and under 30 and 40 years respectively, the ratio which such cases bear to the deaths from all other causes, and the total number of cases on which the calculations are founded:—

TABLE I.

Nature of Occupation.	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	Under 30	Under 40	Ratio of Deaths from Consumption to those from all other diseases.	No. of Deaths.	
											Consumption	Other Diseases.
In-door	9·14	25 88	24·78	21·22	12·55	5·81	0·62	35·02	59·80	1 to 2·08	1291	2687
Out-door...	4·87	20·93	28·04	24·73	14·31	6·82	0·29	25·80	53·84	1 to 2·56	1027	2621

The following table contrasts the same classes of employment after all exceptional occupations have been excluded :—

TABLE II.

Nature of Occupation.	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	Under 30	Under 40	Ratio.	No. of Deaths.	
											Consumption	Other Diseases.
In-door....	9·57	27·96	23·98	20·32	11·40	6·13	0·64	37·53	61·51	1 to 1·98	930	1844
Out-door...	4·79	20·00	28·65	24·48	14·69	7·08	0·31	24·79	53·44	1 to 2·56	960	2453

The correspondence between these two tables and Tables IV., V., XIII., and XV. of the first essay is even greater than might have been anticipated. The ratio obtained from the hospital books, and those derived from the mortuary registers, agree in displaying the greater liability to attacks of consumption of persons employed within-doors. On comparing Table V. of the former essay, with Table II. of the present, it will be seen that the ratios are, for in-door occupations, 1 to 3·81 and 1 to 1·98 respectively; and for out-door occupations, 1 to 4·13 and 1 to 2·56 respectively. In Table IV. of the first essay, which contrasts in-door and out-door employments previous to the elimination of certain exceptional occupations, the ratios were the same for the two classes of employment, while in Table I. of the present essay the ratios are 1 to 2·08 and 1 to 2·56. The deaths, then, present a stronger contrast between in-door and out-door employments than the facts extracted from the hospital books; but the two classes of facts strongly confirm each other.

There is also an entire agreement between Tables XIII. and XV. of the former essay and Tables I. and II. of the present, in respect of the distribution of the cases and deaths from consumption according to age. The cases of consumption registered in the hospital books, as occurring under 40 years of age, in men following in-door and out-door employments respectively, were in round numbers 81 and 63 (Table XIII.), or 83 and 62 (Table XV.); and in the present essay the numbers are 60 and 54 (Table I.), or 61 and 53 (Table II.). So that here also the two classes of employment occupy the same relative place, and indicate the same comparative liability to consumption, whether the hospital books or the mortuary registers are used as the mean of comparison. Both agree in representing pulmonary consumption to be both more frequent, and of earlier occurrence, in men following in-door employments, than in those working in the open air.

The next inquiry entered into in the first essay, was the influence of different degrees of exertion in promoting pulmonary consumption, and

in hastening the period of its attack. This point was illustrated by Tables VI. and XVII. of that essay. The following table shows, for occupations requiring different degrees of exertion, the per centage proportion dying of pulmonary consumption at each period of life, and under 30 and 40 years of age, the ratio of deaths from that disease, and the number of facts upon which the table is founded:—

TABLE III.

Nature of Occupation.	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	Under 30	Under 40	Ratio.	No. of Deaths.	
											Consumption	Other Diseases.
In-door:												
Requiring little exertion . .	11·85	32·21	22·42	19·07	10·48	2·58	1·29	44·06	66·48	1 to 1·76	388	684
Requiring more exertion . .	8·37	23·91	23·21	23·21	12·68	7·90	0·72	32·28	55·49	1 to 2·20	418	881
Requiring great exertion . .	8·22	23·29	23·29	13·70	21·91	8·22	1·37	31·51	54·80	1 to 2·10	73	152
With varied exercise	6·01	25·56	30·08	16·54	9·02	10·53	2·25	31·57	61·65	1 to 2·27	133	302
Out-door:												
Requiring moderate exertion	8·92	23·80	26·78	20·86	10·71	8·33	0·60	32·72	59·50	1 to 2·21	168	372
Requiring greater exertion .	3·55	17·41	28·24	26·83	16·87	6·75	0·35	20·96	49·20	1 to 2·27	563	1279

In the case of in-door occupations, there is the same general agreement between the results of the foregoing table and those of the first essay, which has just been noticed in comparing in-door with out-door occupations.

The ratios obtained from the hospital books were, for the first three classes of employment, 1 to 3·08, 1 to 4·44, and 1 to 5·06; those deduced from the mortuary registers are, 1 to 1·76, 1 to 2·20, and 1 to 2·10. In both cases the sedentary class of occupations holds the same place, and presents the highest ratio; but employments requiring great exertion hold the second instead of the third place in the mortuary registers. The difference, however, which causes this change of place is so slight as scarcely to deserve attention, and may probably be explained by the small number of deaths entered under this head.

The age at which pulmonary consumption proves fatal in the three classes of in-door employment corresponds with the age of attack, as obtained from the hospital books. The numbers under 30 and 40 years of age respectively follow the same order as in Table XVII. of the first essay.

In the class of employments with varied exercise, the proportion of deaths from consumption under 40 years of age does not bear the same relation to the other classes as does the proportion of attacks of consumption. The proportion of deaths under 40 ranks next to that obtained for the sedentary class of occupations, while the proportion of attacks under 40 is higher than that which prevails among persons following sedentary occupations. Though the position of these two classes is different, the two together occupy the same place, in respect of the other two classes of in-door occupation. It will be observed, that the proportion of deaths under 30 does not preserve the same relative position as the proportion under 40 years of age.

On referring to the employments carried on in the open air, it will be seen that the ratio of deaths is somewhat higher in the class requiring moderate exertion, while the ratio of attacks of the disease is higher in the class requiring greater exertion. The per centage proportion of deaths, however, occurring under 30 and 40 correspond with the ratio of attacks as displayed in Table XVII. of the first essay. There is a great excess of both in those employments requiring the lesser degree of exertion. It follows, then, that the correspondence between the results of the foregoing table and those of the first essay, though not exact, is very considerable; and in the case of employments carried on within doors, it is so close as to give strong confirmation to the general principle laid down in the two former essays, that the tendency to consumption varies inversely as the amount of exertion.

It would have been interesting to extend the comparisons already instituted, to the effect of intemperance, of exposure to dust, &c., in promoting pulmonary consumption, and in hastening the period of its attack; but the small number of facts, and the necessary imperfection of the registers themselves, would render such a comparison of little use.

One comparison still remains to be made, which has no parallel in the first communication addressed to the Society, viz.: that of the deaths from pulmonary consumption occurring among the three classes of gentlemen, tradesmen, and artisans. This comparison is made in the following table:—

TABLE IV.

ondition.	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	Under 30	Under 40	Average age at Death.	Ratio.	No. of Deaths.	
												Con-sumption	Other Diseases.
entlemen, &c. . . .	10·84	18·67	27·11	19·27	15·06	6·03	3·01	29·51	56·62	39	1 to 5·00	166	835
radesmen	8·46	24·34	26·98	20·11	12·70	6·35	1·06	32·80	59·78	38	1 to 2·60	189	491
rtisans,&c	7·25	23·69	26·24	22·79	13·34	6·26	0·43	30·94	57·18	38⅓	1 to 2·29	2318	5308

This table corresponds very closely with Table XIX. of the second essay, in which a comparison was made between the deaths at the several ages in the three classes. The ratios of death from consumption follow the same order as the average age at death, being lowest where the average age is highest, and the reverse. Thus the average age at death of the class of gentlemen is 58·61, and the ratio of deaths from consumption is 1 to 5; in the case of the tradesmen, the average age is 48·84, and the ratio of deaths from consumption 1 to 2·60; while in the class of artisans, the average age is 48·06, and the proportion of deaths from consumption 1 to 2·29.

Again, the class of gentry presents a smaller proportional number of deaths under 30 and 40 than either of the other classes. It is also well worthy of observation, that the per centage proportion of deaths from consumption under 30 and 40 is higher in the class of tradesmen than in that of the artisan and labourer, although the ratio of cases of consumption is greater in the latter class. This is doubtless accounted for by the fact already established, that the strong exertion which a considerable proportion of the labouring class employed within doors use in

their occupations, and the large number employed out of doors, has the effect of retarding the attack of pulmonary consumption. A glance at the following table will convince us of the justice of this explanation.

TABLE V.

Nature of Occupation.	Under 30.	Under 40.
In-door, sedentary . .	44·06	66·48
In-door	37·53	61·51
Tradesmen	32·80	59·78
Out-door	24·79	53·44
In-door, requiring great exertion	31·51	54·80

The tradesman, it will be seen, occupies the intermediate place between the in-door and the out-door labourer, between the artisan using little exertion and the artisan using much exertion. It is obvious, therefore, that the class of artisans owes the slight advantage which it enjoys over the tradesmen in respect of the time of death from consumption, to the comparatively healthy effects of strong exertion within doors, and of employment in the open air, which falls to the lot of a part of that class. Another point attracts attention in Table IV., viz., the great proportion of deaths from consumption occurring in the class of gentry from 15 to 20 years of age. Does not this show that the liability to the disease is greater in this class than in the two others; and does it not tend to strengthen the position, that the excess of deaths from consumption in the other classes is due to the unfavourable circumstances in which they are placed?

The ratio of deaths from consumption in the class of gentry, low as it is, would have been still lower if the medical men who are included in it were omitted. The number of cases of pulmonary consumption occurring in members of that profession is very remarkable, and it is a subject of regret with the author that they were not made a separate class.

If we assume that the numbers and proportions in the table are fair representations of the absolute and relative mortality from consumption in the three classes of society in London, and that it is possible, by due attention to the health of our tradesmen and artisans, to place them in as favourable a position as that which the gentry occupy in this respect; if, in other words, the ratio of consumptive cases, instead of being 1 to 2·60 in the case of tradesmen, and 1 to 2·29 in the case of artisans, were in both cases 1 to 5, there would be a saving in the metropolis alone in a single year of no less than 1123 lives.

Again, if we assume the approximate average age at death from consumption in the three classes to be the true age, we must add to these lives, unnecessarily sacrificed, 1937 years of life wasted.

It should also be borne in mind that, taking one case with another, every death from consumption is preceded by two years of lingering illness; and that in a large proportion of cases the fatal attack of the disease is not the first, and that it is often the last of a series.

This rough estimate of the annual waste of life from consumption in the metropolis is formed from the deaths comprised in the tables, which

fall short of those actually occurring, inasmuch as all the deaths in workhouses, unless the employment happen to be stated, are omitted. In order to ascertain more nearly the actual number of deaths from this cause, and the probable waste of life, I propose to calculate the number of deaths occurring in the metropolis, and in England and Wales, from the data furnished by the report of the Registrar General.

Estimate of the number of cases of Pulmonary Consumption occurring annually in the Metropolis, and in England and Wales.

It has already been stated that the number of cases entered in the mortuary registers as pulmonary consumption, or under synonymous titles, between the ages of 15 and 50, is probably a near approximation to the true number; for the number of other diseases, accompanied by slow decay, occurring between these two ages is comparatively small, and certainly bears a much less proportion to true cases of pulmonary consumption than those entered as such, either before 15 or after 60. On referring to the mortuary registers of the metropolis for 1840–41,* it will be seen that no less than 3120 deaths from consumption are entered under 15, and as many as 747 after 60; while the number between 15 and 60 is 10·698; now it must be obvious that these are not deaths from *pulmonary* consumption; for the deaths from that disease, under 15 and above 60, do not bear any such proportion to the deaths from the same cause between 15 and 60. How then is this error to be corrected? and how is the true number of deaths from pulmonary consumption to be estimated? The easiest and simplest method is to start with the assumption that the cases entered as consumption, between 15 and 60, are cases of true *pulmonary* consumption, and then, having ascertained the proportion which the number of deaths from this disease, under 15 and above 50, bears to the number between 15 and 60, to calculate the number that ought to have been entered on the mortuary registers.

In the absence of any accurate tables of the relative number of cases of pulmonary consumption at these three periods † of life, I avail myself of the tables of deaths occurring in the London hospitals during 1840, and published in the Annual Report of the Registrar General for 1842, p. 292. These cases are correctly reported, and on the authority, in most instances, of an examination of the body after death. Before proceeding to make use of these data, it is necessary to premise, that it is not the absolute number of deaths from pulmonary consumption in the London hospitals, which it is proposed to make use of, but merely the relative numbers at different ages.

The number of deaths from pulmonary consumption, occurring in the London hospitals during the year 1840, was 412, which were thus distributed—

Under 15 . .	4
15 to 60 . .	396
60 and upwards	12

The number of deaths, then, occurring under 15 years of age is only one in 99 of those occurring between 15 and 60, while the number of

* Fourth Annual Report of the Registrar General, 1842, p. 330.

† The tables given by Sir James Clerk, in his work on Consumption, do not comprise the first period under 15.

those occurring after 60 is one in 33. Assuming for the present that these are the real proportions, it will be easy to calculate the deaths occurring in the metropolis, and in England and Wales.

The deaths from consumption, between 15 and 60, registered in the metropolis, during the two years 1840 and 1841, were 10,688, or, for one year, 5344; the total number, therefore, according to the above suppositions, will be—

From 15 to 60 .	5344
Under 15 . . .	54
Above 60 . . .	162
Total for the metropolis during one year .	5560

This is about one-eighth of the deaths at all ages, and somewhat less than one-fourth of the deaths of all above 15 years of age.

Now the deaths in the metropolis from all causes, during 1841-42, were 90,556, or, for one year, 45,278; and assuming that the mortality from pulmonary consumption, in England and Wales, bears the same proportion to the total mortality, as it does in the metropolis, we have the proportions—

5560 : 45,278 : : 42,223 : 343,847

—343,847 being the number of deaths from all causes in England and Wales during 1841. This number falls short of the number entered in the mortuary registers, under the general title of consumption, by 17,369 deaths.

This calculation assumes that the relative mortality for the whole kingdom, from pulmonary consumption, is that of the metropolis; an assumption obviously incorrect, and greatly exaggerating the actual mortality from that cause. In order to arrive at a truer estimate of the mortality, it may be fairly assumed that the mortality from pulmonary consumption, for England and Wales, bears the same relation to the mortality of the metropolis, as does the mortality from all causes. This will give the following proportions,—

42,223 : 35,966 : : 2·605 : 2·219

The number of deaths from pulmonary consumption, occurring every year in England and Wales, may therefore be stated, in round numbers, at about 36,000, being rather less than one-ninth of the mortality from all causes at all ages, and 1 in less than 6 of the total deaths occurring above 15 years of age.

It must be understood that this estimate is put forth merely as a rough approximation, and not as a precise calculation. The materials for a more just estimate are still wanting.

Having thus obtained a rough approximation to the number of deaths from pulmonary consumption, occurring in the metropolis and in England and Wales respectively, I resume the consideration of the waste of life due to this cause. The 5560 deaths include males and females, and the first step in the inquiry is to ascertain how many of them belong to each sex. For this purpose, I avail myself of the Hospital Reports for 1840, in which the sex, age, and cause of death are registered, and I find that in 100 deaths from all causes, there are in males 19 deaths from

consumption, and in females 15; and as there is no obvious cause of this disparity, except the relative frequency of the disease in the two sexes, I assume this to be the true ratio. From this ratio it is easy to calculate the number of deaths from consumption occurring in the two sexes; they are in males 3107 and in females 2453. The number of deaths from pulmonary consumption, comprised in the foregoing tables, as occurring in males of all ranks during the year 1839, is 2673; a number falling short of the above estimate by 434, which probably represents the deaths from pulmonary consumption occurring in workhouses in 1839 in men whose employments were not mentioned. The total deaths of adult paupers during that year was 3062, and if we assume that the deaths were equally divided between the two sexes, we shall have 1531 deaths occurring in males; and, on the supposition that the deaths from consumption formed one fourth of the total deaths, 383 deaths from that disease. Now 383 added to 2673 gives 3056 instead of 3107, the number according to the foregoing estimate. The slight difference still existing may probably be accounted for by the excess of deaths of men whose employments were not stated over men dying in workhouses whose previous employments were stated. This latter class was a very large one.

The estimated number of 3107 deaths may probably be regarded as a very close approximation to the number of males of all ages and classes dying of pulmonary consumption every year in the metropolis; and if the distribution according to rank be assumed to be that of Table IV, we shall have the 3107 deaths from consumption divided as follows:—gentry and professional men 193; tradesmen 219; and artisans, &c. 2695; the deaths from all other diseases for the three classes being 971, 569, and 6171. Now if the deaths from pulmonary consumption in the classes of tradesmen and artisans, bore the same proportion to all other causes of death as they do in the class of gentry, we should have, in the place of 3107 deaths from that disease, only 1541, being a saving of 1566 lives, and, on the supposition that the average age of death is that of Table IV, of 2014 years of life; moreover, for each of the 1566 lives prematurely sacrificed, we must reckon at the very least 3132 years of lingering illness during the very prime of life. If the same calculation corrected by the fraction $\frac{15}{19}$, which represents their relative liability to consumption, were applied to the deaths of females, it would raise the estimated annual waste of life to 2212, with an additional loss of 2845 years of life.

In all these calculations it is assumed to be possible, to place the classes of tradesmen and artisans in the same favourable circumstances as the gentry. Can this be done? It would be a great stretch of imagination to suppose that it could be done at once. In all great ameliorations time is an essential element—time for the reformation of bad habits—time for the widening of streets, the enlarging of houses, the re-constructing of workshops, the shortening of hours of labour, for drainage and ventilation, for the more abundant supply of water, for public baths, for the increase of open spaces for exercise and recreation. Habits of intemperance will not suddenly grow into disuse, nor will a desire for pure air be created in a day. As in the case of temperance, so in that of ventilation, the example must be set by the higher classes, before the contagion can be expected to spread to the lower. So long as the rich

shall be content to endure the stifling atmosphere of crowded places of assembly, whether public or private, and to sleep in rooms from which fresh air is sedulously excluded, the poor may be expected to remain indifferent to the foul air of their workshops, and to submit without a murmur to the manifold inconveniences of their places of residence. It is only, then, after the lapse of years that the condition of the tradesman and artisan can be expected to be so improved as to reduce their present fearful mortality from consumption to the low level of the more forward classes. Much, however, may be done at once. Some provision at least may be made for the ventilation of houses and workshops, and for the shortening of hours of labour. Such a provision would save, in the metropolis alone, many hundreds of lives every year. This is not a matter of conjecture, or a loose estimate merely, but admits of demonstration.

It has already been shown (Table II.) that the ratio which deaths by consumption bear to those from all other diseases, is higher in the case of men employed within-doors than in those working in the open air, being in the one case 1 to 1·98, and in the other 1 to 2·56. Now it is well known that, as a general rule, men employed in-doors earn higher wages than those who work out of doors, and that therefore they have the means of procuring better lodgings, clothing, and food. In all these things they have the advantage. They differ in this, that the in-door labourer, while he shares, though in a less degree, the household inconveniences of the out-door labourer, is confined for many hours of each day in heated and ill-ventilated apartments. A large proportion of men so occupied have as much exercise as men employed in the open air; the occupations of the remainder are of a more or less sedentary nature. Those whose employments require more or less exertion, differ from out-door labourers only in the air they breathe; and those who lead a sedentary life, partly in this, and partly in the absence of exercise. The experience of the wealthier classes addicted to sedentary pursuits, shows that such pursuits are not unfavourable to health and longevity. Hence there is good reason to believe that the in-door labourer owes his ill-health, not so much to the sedentary nature of his employment, as to the foul and heated air which he is constrained to breathe. If this reasoning be valid, it will be easy to show what number of deaths occurring among the in-door labourers might be prevented. A simple calculation, based on Table II., shows that the excess of deaths from consumption in the 2774 in-door labourers over the deaths from the same disease in an equal number of out-door labourers, is 150. Out of 930 deaths from consumption, therefore, no less than 150, or about one-sixth, may fairly be assumed to fall victims to the foul air of the workshop. If the entire estimated number of deaths from pulmonary consumption occurring among artisans, be divided between the two classes of in-door and out-door labourers, we shall have the number raised to 214; and the addition of lives prematurely sacrificed, and females, would swell this number to 400 a-year.

The estimates which have been thus formed of the waste of life in the metropolis, will have to be more than doubled to give the waste for the whole of England and Wales. A simple calculation founded on the number of deaths from consumption taking place in 25 town districts,*

* Registrar-General's Report, for 1843, p. 199.

on the supposition that the waste is in the same proportion in those districts as in the metropolis, gives us as the number thus sacrificed 4882, of which number 1000 deaths seem to be fairly traceable to the unwholesome condition of workshops and factories, and the remainder to the state of their dwellings, added to habits of intemperance, and the privations to which they are occasionally exposed.

What part of this waste is to be attributed to causes over which the poor have virtually no control, and what part to their own habits of life, it is of course impossible to state; but after making a liberal allowance for the effects of intemperance, and the occasional use of scanty or unwholesome food, there can be no room to doubt that a fearful waste of human life at present takes place, and that much of this may be prevented by the improvement of dwellings and workshops. Such improvement would doubtless bring with it, as a necessary consequence, a great improvement in the habits of the labouring class; for it has been clearly proved, and is, in fact, a necessary consequence, that all causes of exhaustion are indirectly causes of intemperance. Some experience of the poor, and inquiries expressly directed to this point, have convinced me that they are led into this baneful habit not so much by a love of intemperance and of its treacherous pleasures, as by the opinion that spirituous liquors are necessary to the support of their strength. Those who use strong exertion in their employments drink because they think that without spirituous liquors they could not do their work; but those who lead sedentary employments are often compelled to drink that they may neutralize the debilitating effect of an atmosphere which in extreme cases may be, with little exaggeration, described as combining the temperature of an oven with the foul air of a sewer. If they had pure air, they would soon cease to regard spirituous liquors as necessary to their existence, and the habits which grew out of a supposed necessity, might be fairly left to the correcting influence of experience and example. If those evils were once corrected over which the labouring class have no control, they would not be slow to perfect the work of a wise and far-seeing legislation.

Hitherto the attention of the public has been directed chiefly to the waste of human life, and the consequent misery and expense caused by fevers due to the bad drainage of towns and streets, and the defective construction of the houses of the poor; but those who have so successfully laboured to rouse the public to a sense of these fearful evils, and of the responsibilities growing out of them, have been ignorant of, or have disregarded the more silent and stealthy ravages of a disease which is as surely the result of foul air, overcrowding, and confinement, as fever itself of deficient drainage and unwholesome habitations. If the condition of the dwellings of our poorer classes is justly chargeable with the fevers to which they are constantly falling victims, to the state of our workshops and our long hours of work is as certainly to be attributed a large proportion of the cases of consumption which form so fearful an item in our mortuary registers. If the entire population of this country could be surrounded by influences as wholesome as those to which the higher classes owe their better health, longer life, and comparative immunity from consumption, the number of cases of pulmonary consumption would be greatly reduced, and some thousands of the most valuable part of our population might be saved. This rough estimate may be

Table VI.

Nature of Occupations.	Ratio of Cases of Pulmonary Consumption entered on the Hospital Books.	Ratio of Deaths from Consumption to those from all other Diseases.	Per Centage proportion of cases entered as Consumption.		Per Centage proportion of Deaths from Consumption.		Per Centage proportion of Deaths.				Age at Death.		Per Centage proportion Employed.				
			Under 30.	Under 40.	Under 30.	Under 40.	Under 30.	Under 40.	Above 80.	Above 90.	Average.	Greatest.	Under 40.	Above 40.	Above 50.	Above 60.	Above 70.
In-door	1 to 3·81	1 to 1·98	50·98	83·21	37·53	61·51	21·88	38·82	2·74	0·22	47¼	98	73·98	26·02	13·60	5·62	1·67
Out-door	1 to 4·13	1 to 2·56	36·30	62·30	24·79	53·44	16·68	34·26	3·99	0·59	49⅐	99	63 83	36·17	17·95	7·04	1·15
In-door :—																	
Requiring little exertion . . .	1 to 3·08	1 to 1·76	51·03	81·37	44·06	66·48	24·34	40·29	2·71	0·19	46·86	98	74·88	25·12	13 65	6·31	2·06
Requiring more exertion . . .	1 to 4·44	1 to 2·20	53·41	80·81	32·28	55·49	19·17	36·72	2·77	0·39	48·06	101	72·15	27·85	14·64	5·77	1·75
Requiring great exertion . . .	1 to 5·06	1 to 2·10	48·63	67·55	31·51	54·80	17·81	33·81	1·33	..	47·75	Under 90	68·96	31·04	15·05	3·14	0·94
With varied exercise	1 to 3·32	1 to 2·27	47·28	87·27	31·57	61·65	24·59	41·83	2·53	..	45·68	Under 90	75·64	24·36	12·95	4·31	1·61
Out-door :—																	
Requiring moderate exertion .	1 to 4·65	1 to 2·21	32·76	53·46	32·72	59·50	18·52	38·52	3·16	0·56	47·70	99	68·26	31·74	14·83	5·86	0·84
Requiring greater exertion . .	1 to 4·02	1 to 2 27	33·81	61·28	20·96	49·20	16·45	35·24	3·04	0·49	47·60	98	61·83	38·17	19·49	7 68	1·21

TABLE VII.

Condition.	Per Centage proportion of Deaths.				Average Age.	Greatest Age.	Ratio of Deaths from Consumption.	Per Centage proportion of Deaths from Consumption.	
	Under 30.	Under 40.	Above 80.	Above 90.				Under 30.	Under 40.
Gentlemen, &c.	9·10	20·60	10·80	0·80	58·61	98	1 to 5·00	29·51	56·62
Tradesmen	16·03	32·50	3·39	0·59	48·84	97	1 to 2·60	32·80	59·78
Artisans, &c.	19·86	37·51	2·18	0·34	48·06	101	1 to 2·29	30·94	57·18

very far from the truth; but it is better to err in this way than, by confining ourselves to the establishment of dry abstract principles, however interesting or important, to let pass an opportunity of forcibly drawing the attention of the public to a great evil, equally commanding and admitting of a remedy.

In all investigations of this nature there is much room for error. Some standards of comparison essential to accuracy are at present wanting Causes and effects are so mixed up that it is impossible to separate them. The disease which by destroying the adult puts a younger man into his place, also alters the distribution of the population, so as to swell the number of its own victims; and thus all attempts at perfect accuracy are rendered abortive. Approximations confessedly imperfect, and estimates necessarily rude, must hold the place of those accurate results which force conviction. The author would therefore again guard against misconception. He has not dared to characterise his results as certain or accurate, but merely as approximations to truth, and probabilities more or less strongly confirming one another. His estimates are open to correction, and await that correction at the hands of himself or others; but he trusts that, in the absence of that certainty of which he is in search, the probabilities he has established will serve the purpose of attracting attention to a part of the great subject of public health which has hitherto received comparatively little attention; and, in conclusion, he may be allowed to express his own conviction, that the evils which have been pointed out are not exaggerated.

Two tables are subjoined, which form a useful summary of the chief probabilities thrown together in the three communications, of which this is the last.

On the Progress of the Population of Russia. By Major Graham, Registrar-General.

Sir, *General Register Office, June*, 1844.

I enclose an abstract of a Return which I have recently received of the population, marriages, births, and deaths, in the principal provinces of the Russian empire. I am indebted to the liberality of Count Nesselrode for this Return; which was procured at the instance of Lord Aberdeen, by Lord Stuart de Rothsay, and forwarded to me by Sir James Graham.

I have obtained from other countries similar Returns, to compare with those made under the Registration Act in England. I submit this to the Members of the Statistical Society, as I believe that no Return of the kind has been published before out of Russia; and it appears to me to possess an unusual degree of interest, not only from its novelty, but from the extent of the population, and the varieties of climate and circumstances in which the people of the several provinces are placed.

The Return is for the year 1842, and the abstracts of marriages, births, and deaths, had not been received from Georgia, Koursk, the Trans-Caucasian, or the Caspian provinces: neither have we included in the Return Finland, Poland, the Don Cossacks, the Cossacks in the country of the Black Sea, and of the Oural; the provinces of Iakotsk, Kamschatka, Okhotsk, or Russian America. The population of the Russian empire exceeds 60,000,000; of which the Returns from 53

provinces specify 52,682,711; and give the marriages, births, and deaths among 49,525,420 persons (24,559,414 males, and 24.966,006 females) in the European (and partly Asiatic) provinces,—in Tobolsk, Tomsk, Irkutsk, and Eniseisk,—four provinces of Siberia. The marriages returned were 501,850; the births 2,205,422; the deaths 1,856,183.

The excess of births over deaths was 349,239. This would indicate an increase of 0·7 per cent. (or 7 per 1000) annually.

		Males.	Females.	Total.
1842	Population . . .	24,559,414	24,966,006	49,525,420
	Married	501,850	501,850	1,002,700
	Births	1,127,122	1,078,300	2,205,422
	Deaths	931,635	924,548	1,856,183

The proportion of marriages, births, and deaths, to the population, is shown in the annexed Table (A). I think it very probable that the Returns of births and deaths include still-born children, which are generally registered on the Continent, but have not hitherto been registered in England. As the Returns stand, the births were 4·45 per cent., the deaths 3·75 per cent., of the population. A correction for the still-born would reduce the births to about 4·2, the deaths to 3·5 per cent.

In Russia 1 in 99 persons marries yearly; in England the proportion of marriages is much less, 1 in 128. The births in Russia are more than 8 per cent. on the female population. The mortality in Russia was 1 in 27; and as the population is increasing, we know that the mean duration of life is somewhat lower than 27 years. The mortality in England is 1 in 45 annually, and the expectation of life 41 years.

The comparison would seem to indicate that in Russia marriages are earlier than in England—that more persons marry—that the number of children borne by a given number of women is greater in a given time—that fewer children attain maturity—and that, notwithstanding the rigorous climate, and the causes of insalubrity, the excess of births over deaths adds 300,000 or 400,000 persons every year to the part of the population embraced in the Returns.

The area of the Russian empire is estimated at 7,700,000 English square miles. The area of the 49 European provinces, for which the population of 49,102,697 was returned, is 1,731,324 English square miles; the density is therefore 28 persons to an English square mile, and 38 to a geographical square mile. The density of England and Wales was 276 persons to an English, 366 to a geographical, square mile, in 1841. The area of the two provinces of Siberia,—Tobolsk and Tomsk,—is said by Mr. Koeppen in an official statement (quoted by M'Culloch) to be equivalent to 1,887,569 English square miles. The population of these provinces was 1,315,461 in 1842; and the mean density was therefore less than 1 person to every square mile,—it was 7 to 10 square miles. In the rest of the empire around the arctic region, to which our Return does not extend, there is, according to Mr. Koeppen's statement, not more than 1 person to 4 English square miles.

Russia, as is well known, is divided into viceroyalties, provinces (or oblasts), and districts. The Return in my possession gives the population, marriages, births, and deaths, in each district and province. The abstract which I enclose carries the subdivision no further than provinces.

The Table (B) of the proportion of marriages, births, and deaths, in each province to 100 females living, shows that in some parts of Russia the mortality is less than in some counties of England; but, as a general rule, the mortality was greater than in England. It was greatest in the southern provinces,—from Nijgorod to Ekaterinoslav on the Sea of Azov, including the most fertile of the corn districts, Kharkoff, Penza, Pultava, Viatka, Nijgorod, Saratoff, Riazan, Ekaterinoslav, Orel, Tamboff. The annual mortality was from 4·3 to 5·3 per cent. in these provinces, which lie in the basin of the Dnieper, Don, and Volga; with the general aspect of the country looking south, and towards the Black Sea, the Caucasus, and the Caspian.

The mortality of the northern parts of Russia is generally below 3 per cent. annually; this was the case in Archangel, Minsk, Courland, Esthonia, Olonetz, Pskoff, Vologda, Kalouga, Grodno, Vitepsk, Novgorod, Moghileff. The rivers of those regions flow north or north-west into the Arctic Ocean, the White Sea, and the Baltic. In Wilma and Livonia, the mortality was 3·3 and 3·2, slightly above 3 per cent; in Petersburgh (province) 3·8 per cent: with these exceptions, the mortality of the parts sloping towards the north or north-west, was a fourth or a fifth less than in the southern provinces.

In Tomsk and Irkoutsk, two vast provinces of Siberia, the mortality was so low as 2·4 per cent.; in Tobolsk, however, it was 3·6 per cent.

These remarks refer to females, but the mortality of males and females is nearly the same in Russia.

This Return, I may remark, has evidently been drawn up with great care and accuracy. It gives us a high opinion of the administrative talent and energy with which the Government is carried on.

Those acquainted practically with these matters will be aware how arduous an undertaking it must be to procure a census, and periodical Returns of the marriages, births, and deaths, from such a vast population, so thinly scattered over the face of the country, that in some provinces there is not one inhabitant to a square mile of territory.

The mere fact of registering the marriages, births, and deaths, is also a proof of the deep interest with which the Russian Government regards, and endeavours to promote, the physical interests of the population under its charge.

I am, Sir,
Your obedient Servant,
GEORGE GRAHAM,
Registrar-General.

Joseph Fletcher, Esq.,
&c. &c.

TABLE A.

Rate of Increase of the Population of Russia; and Proportion of Marriages, Births, and Deaths, to the Population, in England and Russia, compared.

Annual rate of increase, ·7 per cent.—Males, ·81; Females, ·62.

	One Marriage to			One Birth to			One Death to		
	Males.	Females	Males and Females	Males.	Females	Males and Females	Males.	Females	Males and Females
Russia (1842) . .	49	50	99	11	11	22	26	27	27
England (1838–41)	63	65	128	15	16	31	43	47	45

	To 100 Males			To 100 Females.			To 100 Persons.		
	Marriages.	Births.	Deaths of Males.	Marriages.	Births.	Deaths of Females	Marriages.	Births.	Deaths.
Russia* . .	2·043	8·980	3·793	2·010	8·834	3·703	1·013	4·453	3·748
England .	1·599	6·539	2·308	1·528	6·250	2·131	·781	3·197	2·219

* The still-born are probably included in the Russian returns of births and deaths. Applying a correction derived from the Prussian returns, in which the numbers still-born are specified, the corrected mortality of Russia will be 3·590, the births 4·296, per cent. annually.

Note.—The return does not state the ages of the living, the ages at death, nor the causes of death; but it is very probable that all these particulars will ultimately be procured. Professor Schubert's volume, "Das Russiche Reich," in his "Handbuch der Allgemeinen Staatskunde von Europa," contains a tolerably good account of the progress of statistics in Russia. The first census (Revision) was taken in 1723, in connexion with a poll-tax, and was to be repeated every 20 years; but it embraced only 5,794,928 males subject to the tax. The church registers were instituted by Peter the Great, in 1722; but their organization was only completed in the time of Catharine II. "From the time of Catharine," says Schubert, "two abstracts were made: (1) the one for the Senate, classed in governments and provinces, first introduced in 1768 by Count Sievers in the governments of Novogorod and Tver. It embraces all the religious sects, *but has not hitherto been made public* ("sind aber bis jetzt noch nicht öffentlich bekaunt gemacht"). (2) The other return, for the Holy Synod, is made in 36 eparchies, which only comprise the members of the Greek Catholic Church (Griechish Catholischen Kirchen). A summary of this return is published every year."† Schubert's calculations are all founded on the ecclesiastical returns. It appears, therefore, that Russia has had for many years two systems of registration in operation (as England has at the present time),—the registers of the established Greek Chuch,—and the civil registers, which are made for the Imperial Government, and of which the return in Table C. is a detailed abstract.

† Schubert, vol. i. p. 147.

TABLE B.—*Density of the Population, and Proportion of Marriages, Births, and Deaths, in the several Provinces of Russia.*

—		Average Population to a Geographical square Mile (of 60 to a Degree).	To 100 Females Living. Marriages.	Births.	Deaths (of Females).
Northern Provinces.	1. Archangel	·9	1·546	8·100	2·222
	2. Olonetz	6	1·911	9·412	2·692
	3. Vologda	7	1·841	9·306	2·801
Great Russia.	4. Petersburgh	41	1·756	9·739	3·770
	5. Novgorod	21	1·828	9·102	2·972
	6. Pskoff	43	1·523	9·112	2·766
	7. Smolensk	70	2·247	9·823	3·269
	8. Moscow	159	2·135	9·019	4·010
	9. Tver	74	1·930	9·301	3·030
	10. Jaroslaff	79	1·440	8·188	3·367
	11. Kostroma	43	1·592	7.626	3·290
	12. Nijgorod	79	1·950	8·758	4·684
	13. Wladimir	85	1·821	8·352	3·941
	14. Riazan	109	2·517	8·296	4·450
	15. Tamboff	90	1·930	7·393	4·279
	16. Toula	139	3·223	8·411	4·171
	17. Kalouga	109	2·138	7·842	2·866
	18. Orel	117	2·421	9·311	4·320
	19. Koursk	142	..	..	..
Baltic Provinces.	20. Esthonia	56	1·657	7·586	2·627
	21. Livonia	59	1·738	8·158	3·048
	22. Courland	67	1·772	6·692	2·453
White Russia.	23. Vitepsk	59	1·128	8·532	2·928
	24. Moghileff	63	2·129	9·263	2·983
	25. Minsk	33	1·550	6·800	2·360
Lithuania.	26. Wilna	69	1·940	8·911	3·345
	27. Grodno	82	2·330	9·078	2·922
	28. Bielostock	103	1·572	7·773	3·025
Little Russia.	29. Volhynia	82	1·689	8·764	3·764
	30. Podolia	164	1·991	8·445	3·701
	31. Kieff	124	1·878	7·823	3·613
	32. Tchernigoff	94	2·091	8·842	3·859
	33. Pultava	95	2·339	8·041	4·727
	34. Kharkoff	51	2·223	8·906	5·260
	35. Voronejs	71	2·240	9·553	3·918
	36. Don Cossacks	16	..	..	..
New Russia.	37. Ekaterinoslav	43	2·217	9·775	4·435
	38. Cherson	49	1·539	8·898	3·294
	39. Crimea	16	1·735	12·298	3·422
	40. Bessarabia	54	2·614	11·003	2·980
Wolga and Caspian Provinces.	41. Kazan	71	1·903	7·377	3·310
	42. Penza	91	2·111	8·225	4·738
	43. Simbirsk	68	1·976	9·055	3·693
	44. Saratoff	30	2·025	9·599	4·640
	45. Astrakan	3	1 858	8·750	2·990
	46. Caucasus, &c.	5	3·031	14·317	5·026
Oural Provinces.	47. Orenbourg	16	2·665	9·804	3·533
	48. Perm	34	1·817	9·668	3·744
	49. Viatka	38	2·102	10·777	4·725
Siberia.	50. Tobolsk	·9	1·772	10·138	3·574
	51. Tomsk		1·461	7·589	2·395
	52. Irkoutsk	·35	1·482	6·905	2·417
	53–5. Iakoutzk, Kamschatka, Okhotsk		..	..	..
	56. Eniseisk		1·392	9·735	3·307
ENGLAND		356	1·528	6·250*	2·131

* It will be recollected that the English Return of Births is defective, and that the still-born are probably registered in Russia.

TABLE C.—*Population, Marriages, Births, and Deaths, of the several Provinces or Governments in Russia*, 1842.

— —	Area in Square Geographical Miles, 60 to the Degree.*	Population.			Marriages.	Births.			Deaths.			Difference between Births and Deaths.	
		Males.	Females.	Total.		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
Northern Provinces:—													
1. Archangel	243,392	107,615	114,784	222,399	1,774	4,781	4,516	9,297	2,618	2,551	5,169	2,163	1,965
2. Olonetz	37,664	113,715	122,855	236,570	2,348	5,792	5,771	11,563	3,638	3,307	6.945	2,154	2,464
3. Vologda	110,080	367,901	414,241	782,142	7,628	19,875	18,673	38,548	11,250	11,602	22,852	8,625	7,071
Great Russia:—													
4 Petersburgh . . .	11,360	229,427	236,364	465,791	4,151	11,724	11,295	23,019	10,133	8,912	19,045	1,591	2,383
5. Novgorod	33,120	340,731	368,892	709,623	6,744	16,572	17,003	33.575	11,067	10,962	22,029	5,505	6,041
6. Pskoff	16,720	350,874	369,450	720,324	5,627	17,321	16.345	33,666	10,307	10,218	20,525	7,014	6,127
7. Smolensk	15,264	523,302	541,348	1,064,650	12,164	27,183	25,996	53,179	17,811	17,698	35,509	9,372	8,298
8. Moscow	8,800	740,517	658,460	1,398,977	14,059	30,149	29,240	59,389	26,648	26,407	53,055	3,501	2,833
9. Tver	17,952	653,563	670,276	1,323,839	12.933	32,437	29,906	62,343	21,190	20,309	41,499	11,247	9,597
10. Jaroslaff	12,912	451,893	561,868	1,013,761	8,091	23,459	22,547	46,006	17,219	18,916	36,135	6,240	3,631
11. Kostroma	23,008	469,063	510,650	979,713	8,128	20,023	18,919	38,942	16,586	16,801	33,387	3,437	2,118
12. Nijgorod	14,048	529,139	574,716	1,103,855	11,206	25,532	24,803	50,335	27,577	26,918	54,495	2,045	2,115
13. Wladimir	13,296	545,371	583,451	1,128,822	10,622	24,717	24,011	48,728	22,465	22,991	45,456	2,252	1,020
14. Riazan	11,312	620,933	609,549	1,230,482	15,343	26,067	24.503	50,570	26,769	27,124	53,893	702	2,621
15. Tamboff	18,432	823,320	841,374	1,664,694	16,248	31,822	30,385	62,207	35.011	36,004	71,015	3,189	5,619
16. Toula	8,464	587,088	588,002	1,175,090	18,949	25,443	24,016	49,459	23,857	24,528	48,385	1,586	512
17. Kalouga	8.656	471,689	471,988	943,677	10,092	19,215	17,796	37,011	13,067	13,529	26,596	6,148	4,267
18. Orel	12,080	693,730	714,848	1,408,578	17,305	33,596	32,963	66,559	30,548	30,879	61,427	3,048	2,084
19. Koursk	12,704	901,663	907,127	1,808,790	†	†	†	†	†	†	†	†	†
Baltic Provinces:—												55,005	37,532
20. Esthonia	5,040	135,524	147,252	282,776	2,440	5,733	5,438	11,171	4,079	3,869	7,948	1,654	1,569
21. Livonia	13,216	376,310	406,628	782,938	7,068	17,120	16,052	33,172	12,342	12,396	24,738	4,778	3,656
22. Courland	7,600	239,907	272,232	512,139	4,824	9,326	8,891	18,217	6,826	6,679	13,505	2,500	2,212

* The area, as estimated by Mr. Koeppen, an officer in the Russian service, is given by M'Culloch in German square miles, which have here been converted into geographical square miles by multiplying the original numbers by 16 (= 4^2). There are 15 German miles to the degree (= 4 × 15) = 60 geographical miles.

† No entries.

White Russia:—													
23. Vitepsk	12,448	363,770	375,262	739,032	4,232	16,247	15,770	32,017	11,206	10,988	22,194	5,041	4,782
24. Moghileff	13,184	421,096	414,382	835,478	8,821	19,940	18,446	38,386	12,530	12,362	24,892	7,410	6,084
25. Minsk	31,728	521,083	521,295	1,042,378	8,080	18,037	17,411	35,448	12,951	12,302	25,253	5,086	5,109
Lithuania:—													
26. Wilna	18,576	650,417	632,770	1,283,187	12,277	29,170	27,216	56,386	22,136	21,169	43,305	7,034	6,047
27. Grodno	9,120	401,513	344,533	746,046	8,026	16,184	15,093	31,277	10,472	10,068	20,540	5,712	5,025
28. Bielostock	2,592	133,133	132,811	265,944	2,088	5,391	4,932	10,323	4,085	4,017	8,102	1,306	915
Little Russia:—													
29. Volhynia	17,168	711,074	699,465	1,410,539	11,814	31,150	30,153	61,303	27,049	26,328	53,377	4,101	3,825
30. Podolia.	9,216	762,512	753,233	1,515,745	15,000	32,825	30,788	63,613	27,726	27,877	55,603	5,099	2,911
31. Kieff	12,768	786,075	799,957	1,586,032	15,023	31,932	30,651	62,583	29,095	28,901	57,996	2,837	1,750
32. Tchernigoff . . .	14,368	670,126	678,720	1,348,846	14,191	30,422	29,593	60,015	26,403	26,189	52,592	4,019	3,404
33. Pultava.	16,992	802,184	815,867	1,618,051	19,084	33,514	32,090	65,604	37,692	38,565	76,257	4,178	6,475
34. Kharkoff	22,176	565,745	574,835	1,140,580	12,778	26,030	25,163	51,193	30,773	30,236	61,009	4,743	5,073
35. Voroneje	21,664	750,420	784,671	1,535,091	17,580	38,357	36,603	74,960	31,973	30,741	62,714	6,384	5,862
36. Don Cossacks . . .	No returns.												
New Russia:—													
37. Ekaterinoslav . . .	18,976	403,145	403,321	806,466	8,943	19,880	19,545	39,425	17,715	17,886	35,601	2,165	1,659
38. Cherson	17,584	436,802	427,815	864,617	6,586	19,828	18,238	38,066	15,157	14,094	29,251	4,671	4,144
39. Crimea	32,640	274,482	242,593	517,075	4,208	15,580	14,255	29,835	8,928	8,302	17,230	6,652	5,953
40. Bessarabia	12,704	361,688	323,561	685,249	8,457	18,187	17,413	35,600	10,255	9,641	19,896	7,932	7,772
Wolga & Caspian Provinces:—													
41. Kazan	17,664	603,861	655,786	1,259,647	12,477	25,068	23,312	48,380	21,510	21,704	43,214	3,558	1,608
42. Penza	10,784	482,501	503,707	986,208	10,634	21,309	20,120	41,429	22,801	23,865	46,666	1,492	3,745
43. Simbirsk	18,256	625,817	622,512	1,248,329	12,303	28,438	27,928	56,366	23,715	22,992	46,707	4,723	4,936
44. Saratoff	55,568	836,239	856,008	1,692,247	17,336	42,132	40,038	82,170	41,380	39,720	81,100	752	318
45. Astrakhan	45,264	74,182	66,894	141,076	1,243	2,958	2,895	5,853	2,248	2,000	4,248	710	895
46. Caucasus, &c. . . .	28,848	83,584	71,371	154,955	2,163	5,132	5,086	10,218	4,079	3,587	7,666	1,053	1,499

TABLE C.—*Population, Marriages, Births, and Deaths, of the several Provinces or Governments in Russia.*—continued.

—	Area in Square Geographical Miles, 60 to the Degree.	Population.			Marriages.	Births.			Deaths.			Differences between Births and Deaths.	
		Males.	Females.	Total.		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
Oural Provinces:—													
47. Orenbourg	104,560	863,974	853,651	1,717,625	22,754	42,116	41,573	83,689	28,940	30,163	59,103	13,176	11,410
48. Perm	43,536	724,968	756,670	1,481,638	13,746	36,587	36,567	73,154	27,170	28,331	55,501	9,417	8,236
49. Viatka	39,952	716,373	804,613	1,520,986	16,916	43,992	42,723	86,715	37,151	38,020	75,171	6,841	4,703
Siberia:—													
50. Tobolsk	1,421,088	397,309	398,624	795,933	7,065	20,496	19,915	40,411	15,265	14,245	29,510	5,231	5,670
51. Tomsk		274,014	245,514	519,528	3,586	9,497	9,135	18,632	6,395	5,881	12,276	3,102	3,254
52. Irkoutsk	2,592,000	257,550	239,077	496,627	3,542	8,609	7,900	16,509	6,276	5,779	12,055	2,333	2,121
53. Iakoutsk		No returns.											
54. Kamschatka . . .		No returns.											
55. Okhotsk		No returns.											
56. Eniseisk		123,441	101,537	224,978	1,413	5,375	4,510	9,885	4,016	3,358	7,374	1,359	1,152
Trans-Caucasian Provinces:—													
*57. Georgia, Imeritia . .	54,096	..	..	838,116	†	†	†	†	†	†	†	†	†
Caspian Provinces . . .	†	†	†	510,385	†	†	†	†	†	†	†	†	†
Kertch-Enikil (townships).	..	6,849	3,476	10,325	102	234	203	437	238	110	348	4	93
Izmail (township and dependencies)	..	22,616	13,633	36,249	289	804	748	1,552	575	355	930	229	393
Odessa (township). . .	..	40,960	34,932	75,892	591	1,762	1,429	3,191	1,503	1,054	2,557	259	375
Tagaurog (township and district)	..	38,299	33,682	71,981	758	2,052	1,789	3,841	1,219	1,118	2,337	833	671
Black Sea—Cossacks' country	No returns received.												
Oural—Cossacks' country .	No returns received.												

* (57.) The sex not distinguished in 3 of 11 districts,

† No returns.

Statistical Report on the Physical and Moral Condition of the Working Classes in the Parish of St. Michael, Blackrock, near Cork. By North Ludlow Beamish, F.R.S., President of the Cork Scientific and Literary Society.

[*Read before the Statistical Section of the British Association at Cork, August,* 1843.]

The parish of St. Michael comprehends the district generally known under the name of the "Peninsula of Blackrock;" being bounded on the north and east sides by the river Lee; on the south, by the tributary stream of Tramore, which forms, with the confluence of the tide, the "Douglas Channel;" and on the west, by the town parishes of St. Nicholas and St. Finn Bars, the former meeting it about one mile from the city of Cork. It contains 1,929 acres, or three square miles, nine acres. The whole population in April, 1843, was 2,630, consisting of 457 families, living in 413 houses; 61 houses are uninhabited, and 9 are in progress of building. Of the population, 2,187 are Roman Catholics, and 443 Protestants, including dissenters, being a proportion of nearly 5 to 1 in a district much inhabited by Protestant gentry. The Catholic males number 1,042, females, 1,145; Protestant males, 197, females, 246;—800 males and 900 females are over 14 years of age; 439 males and 491 females are under that age. Ninety families are living in one room to each family; 260 in two rooms, and 207 in three or more rooms to each family; the average number of persons to a bed is three.

The whole number of the gentry is 372, leaving that of the working classes, 2,258; of these, 1,125 are males, and 1,133 females, which may be thus classified:—

Males.

Carpenters	15	Gingle drivers*	13
Masons	14	Lime-burners	18
Slaters	12	Brick-makers	56
Tailors	10	Fishermen	111
Shoemakers	14	Male servants	79
Smiths	9	Labourers	212
Coopers	3	Aged and infirm	46
Cabinet-makers	2	Children	426
Gardeners	32		
Farmers	53	Total Males	1125

Females.

Employed as servants, in field work, &c.	372
Children, and aged and infirm	453
Unemployed	308
Total Females	1133

In the above enumeration are not included the inmates of the Ursuline convent, numbering 50 nuns, 80 boarders, and 20 servants; Mr. Rudkin's academy for young gentlemen, containing 26 Protestant males; and Miss Bergin's seminary for young ladies, containing 16 Protestant females.

One hundred and thirteen of the working classes hold land, varying from a quarter of an acre to seven acres each. They pay an average yearly rent of 3*l.* per acre, exclusive of poor rate and county rate; the

* Generally owners.

former of which may be averaged at 1*s.* 10½*d.*, and the latter at 5*s.* 10*d.* per acre annually. Those holding under leases are also subject to the payment of tithe, which averages 2*s.* an acre; but this is not now very strictly enforced in the parish from the small holder, the landlord being at present immediately responsible to the minister. The soil is generally excellent, and capable of bearing the finest wheat crops. The course of tillage is potatoes and wheat alternately; the former being manured, but so indifferently, and the general preparation of the land being so imperfectly performed by the working farmer, that the potato crop seldom yields more than seven tons, or the wheat more than six barrels of 20 stone, or about 3½ English quarters per acre, being not more than two-thirds of the produce of the same description of land under a proper system of tillage. Great ignorance, or an indolent adherence to old habits, is exhibited in the application of manure, which is often left for days previous to use exposed, in small heaps, to the action of the atmosphere, and consequently to the loss of its most fertilizing qualities by evaporation. Many of the labouring class hire small portions of manured land from the gentry, for the purpose of speculating in early potatoes, which, if productive, and at the ordinary average price, yield them a fair profit. Such portions of land, varying from a quarter to two or three acres, let at the rate of 10*l.* to 12*l.* an acre, which, although apparently high, often yields a profit of 6*l.* to 8*l.* per acre. But of late years the produce of potato ground has been very uncertain; and when the crop fails, either the poor tenant becomes a severe loser, or fails to make good his agreement with the proprietor; generally, the emergency is met by abatements on the part of the landlord.

The number of men and boys able to work, and dependent upon work for subsistence, is 653. Of these, 370 are employed, and 283 unemployed. A great portion of the latter subsist on the earnings of some member of the family who is employed; others support themselves in a temporary manner by pledging or selling part of their effects; and others, on the alms of the benevolent. The workhouse is the last resource; and, at the present time, although 283 males and 308 females, or *more than one-fourth of the working population*, are without the means of earning their livelihood, in consequence of the want of employment, *only three persons* belonging to the parish are in the workhouse.

Wages.—Tradesmen's wages average 20*s.* per week; labouring men receive 5*s.* 10*d.*, women, 3*s.*, and children, 2*s.* per week; but many able-bodied men work for 5*s.* a-week. For particular kinds of labour, such as quarrying, the wages are 7*s.* per week; and lime-burners receive 10*s.*, in consideration of being employed by night. From the superabundance of labour, wages do not, as formerly, rise in time of harvest, and good reapers can be had at the present moment (August, 1843), at the ordinary wages of 1*s.* a-day.

Food, Clothing, &c.—The food of the poorest labourer consists of potatoes and milk, or potatoes and salt-fish, the cost of which is about 9½*d.* per head per week, or 4*s.* 8*d.* per week for a family of six. A considerable number, however, use meat and bread occasionally; 1,200, or more than one-half, once a-week; and 700, twice a-week. The average cost of food for the whole is 1*s.* 7*d.* per head per week, or 9*s.* 6*d.* per week for a family of six persons. The precarious condition and improvidence of the fishermen is much to be deplored. According to a

late Act of Parliament, they are prevented from fishing nearly one-half the year; and they are often unsuccessful at other periods; yet, while employed, they use bread and tea, the common labourer living on potatoes and milk, and they seldom put by anything to meet emergencies. Only three Blackrock fishermen have deposits in the savings' bank; these average 7*l.* each.

The cost of clothing annually is 18*s.* per head for a family of six; of coal, 9*d.* per week, for the same number: 1,200 men, and 800 women, or nearly nine-tenths of the working population, wear shoes and stockings; 320 have one or more pigs; 290 families only of the whole population have pig-sties. Of the 413 inhabited houses, only 230 are provided with privies; and the want of sewers, drains, water-shoots, and appropriate receptacles for carrying away the dirt and drainage from the houses of the labouring poor, is a great impediment to their cleanliness. One of the greatest wants which they experience is the want of water, as well for drinking as for domestic purposes. There are two public pumps of hard water, about a mile apart, but the water in one of these is of a very indifferent quality; at times, scarcely available for any domestic purpose, and the poor of this part of the parish are frequently obliged to send across the river to the opposite bank, at a distance of a mile, and at a great sacrifice of time and labour.

Three hundred and thirty-six of the working classes receive assistance from the loan bank, the average amount of each loan being 2*l.* 10*s.*; 38 have deposits in the savings' bank, averaging 10*l.* each; 300 have articles pledged, the amount of the united pledges of each individual averaging 2*l.*; 300 are in arrear of rent, at an average of 3*l.* The whole amount of arrear is 900*l.*

Education.—190 Roman Catholic males attend the Blackrock national school.
165 Roman Catholic females, Mrs. Murphy's free school in Ballintemple.
181 Roman Catholic females, the Convent free school.
80 Roman Catholic females, Mrs. Meade's school at Ballinlough.
37 Protestant males and females attend the Protestant free school in Ballintemple.
26 Protestant males, Mr. Rudkin's academy.
16 Protestant females, Miss Bergin's seminary.

Thus two-thirds of the children under 14 years of age are in progress of education. An average yearly sum of 3*l.* each is paid for the education of 142 of the children.

Of the 457 families into which the population is divided, and 87 of which only are gentry, 435 families possess books, and 236 the Bible.

The moral condition of the working classes is extremely good; the only crimes committed are petty larcenies, and there are only two illegitimate children in the parish. Habits of intemperance, as regards intoxicating liquors, are little known, nor can this favourable feature be attributed altogether to the temperance or total abstinence movement—unless, perhaps, by the influence of example; for out of the whole working population of 2,258, only 160 males, and 60 females, or less than one-tenth of the whole, have taken the temperance pledge.

The large proportion of unemployed persons, particularly females, in

this district, is much to be deplored. It may be mainly attributed to the large proportion of land under pasture, in the demesnes of the gentry, which thus limits the field work to little more than one fourth of the area of the district. There is no manufactory or public work, with the exception of small lime-works and brick-making, which employ but a very limited number of persons; the quarries and lime-kilns about 36 throughout the year; and the brick-making, about 90, of all ages, for three months.

As no registry of deaths is kept in the parish, no statistical statement can be made, or accurate conclusions drawn, as to the mortality of the working population. In the Catholic community there are generally five persons to a family; one baptism to every five families, and one marriage to every five baptisms, annually.

Sanitary Condition.—There is no endemic disease peculiar to the district. A light and dry soil thinly covers a limestone rock, the strata of which crop up at a high angle, in some places nearly perpendicular, causing a perfect drainage of the surface. In a few places, the soil rests upon hills of diluvial sand and gravel, which equally drain the surface. A few pools in hollows of the limestone, and two or three small springs, offer nothing to create marsh or boggy surface. Free, therefore, from miasmatic influence, intermittent fever or ague is almost unknown,—only six cases having received dispensary attendance during the last seven years.

Phthisis or consumption cannot be considered frequent, an annual average of only three cases of this disease fully developed, and an annual average of six cases of spitting of blood, appearing in the dispensary journal for the same period.

The total number of medical cases for the last seven years was 7,924, being an annual average of 1,132; surgical, 2,094, or an average of $299\frac{1}{7}$ annually. The total number of cases of all descriptions for the same period was 10,468, giving an annual average of $1,495\frac{1}{2}$, or more than half the population.

A serious visitation of typhus fever took place in the first year of the septennial period (1836), the number of cases among the poor amounting to 353, or about one-seventh of the whole. This gradually subsided in the following years to 110, 85, 102, 63, 37, and 46.

In the years 1832 and 1834, the district was severely afflicted with cholera, after which it nearly disappeared: in the latter part of 1837, and beginning of 1838, it returned, but from the judicious treatment adopted by the dispensary physician, Dr. Haines, was followed by few fatal results.

On comparing the pulmonary with abdominal affections in this district, the singular fact is observable, that while the pulmonary affections exceeded the abdominal in each of the first six years (1836 to 1842,) the order is reversed in the seventh year. This may be referred to the altered condition of the climate, the past summer having been unusually dry and warm, which conclusion appears to be strengthened by the fact, that the actual as well as relative proportion of pulmonary affections throughout the year was diminished, while, notwithstanding the plentiful potato crop, the actual and relative proportion of abdominal disorders among the poor was augmented.

Statistics of Fires in London.

In the number of this Journal for September, 1838 (vol. i. p. 283), an account was given of the formation and organization of "The London Fire-engine Establishment," which not only created for the first time an effective system for extinguishing or arresting actual conflagration, but also originated a regular accumulation of data respecting the most prevalent accidental *causes* of fire, calculated to afford important suggestions as to the means, yet more desirable, of *preventing* the occurrence of this formidable species of individual disaster and public danger. As regards the primary object of the combination, the more prompt extinction of fires actually broken out, the paper in question shows to what extent it had been attained in the course of the first five years during which the establishment was in operation, from 1833 to 1837, from the data furnished by the registry which it regularly keeps of the number, extent, &c. of fires in every year; the most important fact thus indicated being, a considerable diminution of the proportion which the number of fires wherein the premises were either wholly consumed or seriously damaged, bore to the total number of cases.

As regards the *causes* of fires, the first class of facts furnished by the records of the Establishment is that which relates to the respective degrees of liability to such accident attaching to the nature of the premises or their occupancy. The paper in this journal already referred to, presents a list of those descriptions of occupation of premises in which fires had occurred most frequently during the same period of five years, stating the number that had happened in each kind of occupation; from whence naturally follow certain deductions as to the comparative chances of fire necessarily attending particular trades and occupations.

A still more important kind of data supplied by the same systematic registration, consists in the specification of the ascertained cause of each individual fire. Herein the prompt attendance and the diligent endeavours constantly used by the firemen of the Establishment to trace out the particular occasion of each conflagration had already been so satisfactory in their result, that the same period of five years had sufficed to reduce the cases in which the cause was undiscovered to a very small proportion. Accordingly, the paper in question presents a tabular statement of the several causes which had led to fires, and the number of instances under each head, so far as the same could be ascertained, in each year from 1833 to 1837; from whence is shown the relative frequency of the several causes, whether arising from negligence, from necessary nature of occupation, or from inevitable accident.

And finally, a third statement in the same paper, combining the materials of the two former, exhibits the several causes of fires in the different classes of buildings and trades furnishing the greatest number of fires, specifying the numbers in each class assignable to each cause respectively; thus affording means to discover those peculiar circumstances in a given trade which subject it to this kind of danger.

Again, the quarterly number of the Journal of December last (vol. vi. p. 361) presents a continuation of the results of the operations and the observations of the Metropolitan Fire-engine Establishment, in the shape of extracts from the Report of Mr. Braidwood, superintendent of

the Metropolitan Fire Brigade, to the managing Committee of the Establishment, on the fires which occurred in the year 1842, including an abstracted statement of the fires during each of the *ten* years previous. Here, again, the leading fact regarding the increased effectiveness of the Establishment appears in the still decreasing proportion of the cases of total destruction to that of the whole number of conflagrations. The other most remarkable fact presented by this tabular view is, that the proportion of cases of fire in which *gas* was found to be used on the premises, had increased in the same ten years from *one*-fourth to *three*-fourths of the whole number of fires—a fact, however, which of itself cannot be taken to indicate anything beyond the rapid progress of the substitution of gas-lights for the old modes of artificial lighting.

We now extract from the Appendix to the same Report a *particular* statement of the fires which took place in London in each of the same ten years. The former of the two papers already referred to, having confined its list of the occupations of premises to those classes in which more than six fires had occurred during the five years, the present table, specifying every class in which any fires whatever have occurred, exhibits upwards of a hundred several descriptions of occupancy which do not appear in the former statement. In like manner, the account of the causes of fire in the several classes of buildings having, in the same paper, been limited to those classes (18 in number) wherein more than 20 fires had occurred during the five years, the present statement will be found to specify the causes, so far as discovered, in each several description of occupancy, amounting to upwards of a hundred and eighty. Since, also, the latter statement extends over ten years in lieu of five from the complete organization of the Establishment, it presents the means of carrying out the deductions of the preceding paper with greater fulness, precision, and certainty.

The following table, then, based on the experience of ten complete years, supplies all the further data on this subject which it will be requisite to place on record in the pages of this journal, excepting only a brief statement of the gross result of each succeeding year's operations.

At a period when the municipal arrangements of our large towns for the purposes of public health and safety are undergoing so severe a scrutiny as that to which they are now subjected, it would be well that the subject of fire police should not wholly escape attention, with reference not only to supplies of water easily accessible, but also to express arrangements by which the services of some police officer of experience in these cases shall always be available for the direction of proceedings, where no such complete establishment exists as that of the London Fire Brigade. The supply of water for such purposes is too often left to the mere good-nature of private companies; and the loss of life and property through the pure helplessness of alarm, of surprise, and of ignorance regarding the progress of such casualties, is very great. While there is a competition among some of our largest corporate towns for the best chief of their police, it would, therefore, not be amiss, were they to apply some of this spirit of rivalry in good administration to providing that each of their several police forces shall contain at least one person of skill in these matters; and Mr. Braidwood's is a normal school, in which they may always rely on finding men of character and experience.

List of Fires which took place in London in Ten Years, commencing 1st January, 1833, ending 31st December, 1842.

TRADES.	Totally Destroyed	Considerably Damaged.	Slightly Damaged.	Gas.	No Gas.	Total.	CAUSES.
Apothecaries and Dealers in Drugs, but no Chemical Works carried on.	1	10	8	13	6	19	Trade 6; gas 3; unknown 10.
Archel-makers	..	1	..	..	1	1	Trade 1.
Asphalte Works	..	1	1	..	2	2	Trade 2.
Bagnios	..	8	21	2	27	29	Curtain 19; gas 1; intoxication 4; candle 1; unknown 4.
Bacon-dryers	..	..	3	2	1	3	Trade 3.
Bakers	7	46	87	108	32	140	Trade 88; gas 14; flue 11; candle 2; fire on hearth 1; unknown 24.
,, (Sea Biscuit)	..	2	1	2	1	3	Trade 3.
,, (Muffin)	..	..	1	..	1	1	Trade 1.
Barge and Boat Builders	..	5	6	..	11	11	Incendiarism 1; trade 9; unknown 1
Basket-makers	2	4	2	..	8	8	Trade 2; unknown 6.
Bath-keepers	..	..	1	1	..	1	Trade 1.
Beer-shops	3	9	20	24	8	32	Curtain 6; gas 5; flue 2; stove 1; smoking tobacco 3; pipe stove 1; lucifer 1; copper badly set 1; unknown 13.
Blacking-makers	..	1	1	1	1	2	Unknown 2.
Booksellers, Binders, and Stationers	..	40	39	55	24	79	Gas 23; flue 8; stove 2; trade 7; candle 6; incendiarism 1; accidents 1; child 2; lucifer 1; lime over-heating 1; unknown 27.
Bottle Merchants	..	1	..	..	1	1	Candle 1.
Brewers	..	8	5	6	7	13	Trade 5; flue 1; candle 1; making gas 1; coals over-heating 1; unknown 4.
Brick-makers	..	..	1	..	1	1	Trade 1.
Brokers and Dealers in Old Clothes	3	23	22	21	27	48	Intoxication 1; lime over-heating 1; flue 4; trade 3; curtain 4; fire on hearth 1; gas 3; candle 4; lucifer 1; stove 1; children 2; unknown 23.
Butchers	..	1	1	1	1	2	Lime over-heating 1; flue of copper, 1.
Builders	2	1	8	..	11	11	Lime over-heating 3; trade 5; candle 1; unknown 2.
Cabinet-makers	15	39	30	18	66	84	Trade 37; flue 5; candle 5; stove 1; gas 1; unknown 35.
Cane-dyers	..	2	..	..	2	2	Trade 2.

List of Fires which took place in London in Ten Years, from 1833 *to* 1842.—continued.

TRADES.	Totally Destroyed	Considerably Damaged.	Slightly Damaged.	Gas.	No Gas.	Total.	CAUSES.
Carpenters and Workers in Wood, not Cabinet-makers.	24	96	125	57	188	245	Trade 100; flue 9; stove 4; incendiarism 3; gas 5; children 2; candle 16; fire on hearth 3; accident 2; smoking tobacco 1; cinders 1; spark 2; carelessness 2; lucifers 1; curtain 1; working late 1; unknown 92.
Carriers	1	1	..	2	..	2	Unknown 2.
Cart-grease-makers	..	1	..	..	1	1	Trade 1.
Cement and Plaster of Paris Works	..	2	..	..	2	2	Trade 1; unknown 1.
Caoutchouc Manufacturers	..	5	2	3	4	7	Trade 5; flue 1; unknown 1.
Chandlers	6	16	26	23	25	48	Trade 2; candle 3; gas 9; intoxication 1; stove 1; lucifers 1; curtain 2; flue 2; accident 1; copper flue 1; unknown 25.
Charcoal and Coke (Dealers in)	..	2	9	1	10	11	Accident 2; trade 5; unknown 4.
Cheesemongers	3	6	11	20	..	20	Smoking hams 1; gas 4; unknown 15.
Chemists, including all places in which are laboratories for chemical purposes.	2	18	20	18	22	40	Trade 31; flue 1; carelessness 1; experiment 1; unknown 6.
Chocolate-makers	..	..	1	..	1	1	Trade 1.
Churches	1	8	9	8	10	18	Stove 8; gas 1; flue 2; pipe stove 1; hot-air flue 1; descending stove 1; lightning 2; fire on hearth 1; unknown 1.
Cigar-makers	..	3	1	2	2	4	Trade 2; flue 1; doubtful 1.
Coach-makers	5	7	13	6	19	25	Smoking tobacco 1; stove 1; flue 2; lamp-black overheating 2; trade 5; candle 1; unknown 13.
Cochineal-dryers	..	..	1	1	..	1	Trade 1.
Coach-painters	1	..	..	..	1	1	Unknown 1.
Coffee-shops and Chop-houses	1	8	25	29	5	34	Flue 9; curtain 7; pipe stove 3; stove 1; trade 1; gas 2; candle 1; reading in bed 1; blocked up flue 1; unknown 8.
Coffee-roasters	..	5	14	6	13	19	Trade 17; unknown 2.
Colour-makers, not mere Colour-shops	..	5	10	2	13	15	Trade 14; unknown 1.
Confectioners and Pastry-cooks	1	8	12	16	5	21	Trade 10; gas 5; unknown 6.
Coopers	3	1	5	1	8	9	Candle 2; trade 4; flue 2; unknown 1.
Cork-burners	1	1	3	1	4	5	Gas 1; trade 4.

Cork-cutters	1	3	..	1	3	4	Candle 1; pipe stove 1; gas 1; unknown 1.
Corn-chandlers	2	11	3	9	7	16	Flue 2; trade 2; accident 1; child 1; gas 1; over-heat of kiln 1; Unknown 8.
Corn-mills	..	..	1	..	1	1	Trade 1.
Cotton Wool (Workers in)	1	2	3	2	4	6	Trade 4; over-heating 1; drying waste 1.
Cotton-wick Manufacturers	..	1	..	1	..	1	Trade 1.
Curriers and Leather-sellers	2	5	4	6	5	11	Trade 4; smoking tobacco 1; unknown 6.
Comb-makers	..	1	..	..	1	1	Unknown 1.
Distillers	..	13	7	8	12	20	Trade 14; furnace adjoining 1; repairing a vat 1; spark 1; unknown 3.
,, (Illicit)	..	3	3	1	5	6	Trade 6.
,, of Tar	2	4	1	..	7	7	Trade 7.
Docks	..	1	4	..	5	5	Cask of spirits falling 1; spontaneous combustion 1; furnace of steam-engine 1; lighted tobacco falling through grating 1; carelessness 1.
Drapers (Woollen and Linen), and Mercers	3	46	67	109	7	116	Flue 4; gas 77; candle 7; incendiarism 3; pipe stove 2; lucifers 1; curtain 3; chafing-dish 1; carelessness 1; unknown 17.
Druggists (Wholesale)	1	..	..	..	1	1	Bottle of ether being broken 1.
Drysalters	..	1	3	1	3	4	Trade 1; gas 1; over-heating 1; unknown 1.
Dyers	..	5	7	7	5	12	Flue 3; trade 6; gas 1; unknown 2.
Eating-houses	1	3	36	34	6	40	Trade 18; flue 11; gas 5; curtain 3; unknown 3.
Farming Stock	3	27	3	..	33	33	Over-heating 13; incendiarism 7; suspicious 1; heating tar 1; children 1; railway 1; trade 2; unknown 7.
Feather Merchants	1	5	6	4	8	12	Flue 1; stove 4; steam furnace flue 1; trade 3; fire-works 1; curtain 1; unknown 1.
Fellmongers	1	1	1	..	3	3	Candle 1; trade 1; unknown 1.
Felt-makers	1	..	1	..	2	2	Trade 2.
Fire Preventive Company	..	1	..	..	1	1	Experiment 1.
Firework-makers	4	10	6	1	19	20	Trade 19; unknown 1.
French Fancy Warehouses	..	..	2	..	2	2	Lucifers 2.
Flax-dressers	..	1	6	2	5	7	Accidents 1; trade 5; unknown 1.
Floor-cloth Manufacturers	1	2	1	2	2	4	Trade 3; unknown 1.
Founders	..	12	14	8	18	26	Furnace 2; trade 18; spontaneous ignition 1; unknown 5.
Furriers and Skin-dyers	2	4	3	4	5	9	Candle 1; flue 2; trade 1; unknown 5.
Gaming-houses	..	1	1	..	2	2	Candle 1; hand grenade 1.

List of Fires which took place in London in Ten Years, from 1833 *to* 1842.—continued.

TRADES.	Totally Destroyed.	Considerably Damaged.	Slightly Damaged.	Gas.	No Gas.	Total.	CAUSES.
Gas Works	..	7	18	25	..	25	Gas 6; trade 19.
Glass and Emery Paper-makers	..	1	..	..	1	1	Flue 1.
Glass-blowers	..	..	1	..	1	1	Furnace 1.
,, (Illicit)	..	2	3	1	4	5	Trade 5.
Glass-benders	..	1	..	..	1	1	Trade 1.
Grocers	7	23	29	54	5	59	Gas 17; trade 3; flue 2; children 1; candles 6; lucifers 1; hot cinder 1; stove 1; unknown 27.
Glue-makers	..	1	1	..	2	2	Flue 1; trade 1.
Gunpowder (Sellers of)	..	1	..	1	..	1	Trade 1.
Granary-keepers	1	1	1	2	1	3	Kiln 1; steam-engine 1; unknown 1.
Hat-makers	2	32	23	36	21	57	Trade 27; flue 6; gas 4; airing clothes in stove 1; candle 1; incendiarism 1; boy lighting a fire 1; unknown 16.
Hemp and Flax Merchants	1	2	..	..	3	3	Trade 1; candle 1; smoking tobacco 1.
Horse-hair Merchants	2	1	5	..	8	8	Trade 4; stove 1; broken windows 1; unknown 2.
Hotels, including Club-houses	..	13	26	38	1	39	Flue 12; gas 6; curtain 8; trade 1; lamp 1; reading in bed 2; candle 4; rarifying stove 1; steam furnace 1; defect in hearth 1; unknown 2.
Hair-dressers using ovens	..	..	1	..	1	1	Trade 1.
Ink-makers	1	1	..	..	2	2	Trade 2.
Japanners	1	5	5	1	10	11	Trade 10; unknown 1.
Lamp-black-makers	1	6	5	1	11	12	Trade 9; flue 1; unknown 2.
Laundresses	1	6	8	2	13	15	Trade 9; ironing stove 1; flue 2; lucifer 2; spark 1.
Leather (Patent) Makers	..	2	3	1	4	5	Trade 4; spontaneous ignition 1.
Lime Wharfs	..	..	1	..	1	1	Trade 1.
Livery Stables	..	1	4	..	5	5	Trade 5.
Lodging-houses	2	66	372	77	363	440	Intoxication 6; flue 86; curtain 225; children 27; smoking tobacco 12; trade 2; fire on hearth 4; smoothing iron 1; gas 1; fumigation 4; candle 39; timber under hearth 1; accident 4; old age 1; incendiarism 2; fits 1; lucifers 7; spark 4; stove 1; cat 1; carelessness 2; naptha lamp 1; unknown 58.

Lucifer-match-makers	..	36	27	5	58	63	Trade 60; curtain 1; unknown 2.
Maltsters	1	4	1	..	6	6	Trade 4; unknown 2.
Manganese Manufacturers	..	..	1	..	1	1	Unknown 1.
Marine Stores (Dealers in)	2	7	14	5	18	23	Spark 1; trade 7; candle 2; curtain 1; smoking tobacco 1; gas 1; incendiarism 1; unknown 9.
Mattress-makers	..	2	2	1	3	4	Steam-engine 1; trade 3.
Mast and Block Makers	1	..	..	..	1	1	Unknown 1.
Millers	3	..	..	..	3	3	Trade 1; unknown 2.
,, (Steam)	..	2	3	4	1	5	Trade 5.
Musical Instrument Makers	..	6	4	1	9	10	Trade 4; flue 1; refusing to admit firemen 1; unknown 4.
Mustard-makers	..	..	1	..	1	1	Trade 1.
Naptha Manufacturers	1	1	1	..	3	3	Trade 3.
Nuts (dealers in)	..	..	2	1	1	2	Bleaching nuts 2.
Oil and Preserve Merchants	1	..	1	1	1	2	Trade 1; unknown 1.
Oil and Colourmen, not Colour-makers	7	28	52	44	43	87	Trade 34; gas 4; flue 2; candle 14; gunpowder 1; spontaneous combustion 1; curtain 1; friction 1; dung over-heating 1; lucifers 1; carelessness 1; unknown 26.
Oil Refiners	..	..	1	..	1	1	Trade 1.
Oil Works	1	2	..	1	2	3	Trade 2; unknown 1.
Painted Baize Makers	1	2	1	1	3	4	Flue 1; trade 1; unknown 2.
Painters, Plumbers, and Glaziers	1	4	8	4	9	13	Trade 4; lime and rain 1; unknown 8.
Panoramas	..	..	2	2	..	2	Curtain 1; illumination 1.
Paper-hangers	1	..	1	1	1	2	Flue 1; unknown 1.
Paper-mills	..	3	1	..	4	4	Incendiarism 2; unknown 2.
Paper-stainers	..	1	5	2	4	6	Trade 3; candle 1; oil thrown on the fire instead of water 1; unknown 1.
Pawnbrokers	3	8	6	16	1	17	Gas 3; flue 2; curtain 1; unknown 11.
Perfumers	..	..	1	..	1	1	Trade 1.
Picture-dealers	..	1	..	..	1	1	Unknown 1.
Pipe-makers	..	1	3	1	3	4	Trade 3; unknown 1
Pitch-makers	..	2	..	..	2	2	Trade 2.
Playing-card-makers	..	1	2	2	1	3	Trade 2; unknown 1.
Pork-butchers	..	..	3	3	..	3	Trade 2; gas 1.
Potteries	..	..	2	1	1	2	Stove 1; trade 1.

List of Fires which took place in London in Ten Years, from 1833 *to* 1842.—continued.

TRADES	Totally Destroyed	Considerably Damaged.	Slightly Damaged.	Gas.	No Gas.	Total.	CAUSES.
Printers and Engravers	3	10	23	22	14	36	Pipe stove 2; stove 2; flue 4; trade 11; gas 6; steam-engine 1; flue of steam-engine 2; unknown 8.
,, (Copper-plate)	..	8	7	4	11	15	Stove 3; trade 9; gas 1; candle 1; unknown 1.
Printers' Ink Makers	1	3	..	..	4	4	Trade 4.
Prisons	..	2	2	2	2	4	Stove 1; lime over-heating 1; unknown 2.
Public Buildings	5	5	13	12	11	23	Flue 7; incendiarism 1; late hours 1; timber under hearth 1; fireworks 1; thawing water-pipe 1; illumination 1; kiln 1; stove 1; gas 3; spark 1; unknown 4.
Private	27	304	1,604	444	1,491	1,935	Lucifers 3; gas 11; curtain 855; flue 346; children 53; fire on hearth 18; stove 23; reading in bed 5; fumigation 21; candle 123; fireworks 5; bug-hunting 2; chafing-pan 1; intoxication 11; timber under hearth 2; hot air stove 2; incendiarism 8; smoking tobacco 5; pipe stove 6; hot cinders 8; lightning 3; boiling pitch 1; ironing-stove 1; spark 6; burning cask 1; insanity 2; coppers badly set 3; thawing water-pipes 1; party wall 1; defect in hearth 3; carelessness 5; sewing in bed 1; naptha lamp 1; warming bed 1; plumbers 1; heating tar 1; making polish for furniture 2; children playing with lucifers 3; children playing with fire 6; fainting 1; cat 2; doubtful 2; copper fire 1; wax-taper 1; unknown 377.
Public Places (not Theatres)	..	1	..	..	1	1	Fireworks 1.
Rag-merchants	1	10	10	2	19	21	Fire on hearth 2; overheating 5; stove 1; candle 3; trade 6; unknown 4.
Railways	..	2	..	1	1	2	Trade 1; unknown 1.
Ribbon-dressers	..	..	1	..	1	1	Trade 1.
Rope-makers	..	8	6	1	13	14	Trade 9; smoking tobacco 1; fireworks 1; unknown 3.
Sack-makers	..	2	2	..	4	4	Trade 3; old flue 1.
Sail-makers	1	..	1	..	2	2	Candle 1; unknown 1.
Silk-dressers	..	..	1	..	1	1	Unknown 1.

Sale Shops and Offices, no hazardous goods	19	83	223	224	101	325	Gas 93; stove 12; trade 6; flue 42; candle 21; pipe stove 2; fireworks 1; heating by steam 1; fire on hearth 2; accident 6; lucifers 2; smoking tobacco 2; cat 1; spark 1; incendiarism 2; carelessness 1; working on Sunday 1; stove badly set 2; copper 1; curtain 1; unknown 125.
Saltpetre-refiners	..	1	..	1	..	1	Trade 1.
Saw Mills	3	6	6	8	7	15	Trade 5; steam-furnace 2; steam-engine 1; rags overheating 1; friction 1; drying-stove 1; candle 1; unknown 3.
Schools of Industry	..	..	2	..	2	2	Incendiarism 2.
Ships	..	18	19	..	37	37	Rags overheating 1; stove 6; steam 1; lime overheating 6; stove-pipe 2; cooking 3; heating pitch 1; candle 2; cargo overheating 3; repairs 1; workmen 1; unknown 9.
Ship-breakers	..	..	1	..	1	1	Incendiarism 1.
Ship-builders	1	3	8	..	12	12	Trade 8; unknown 4.
Ships (Steam)	..	6	10	..	16	16	Trade 9; steam 2; steam-engine 2; cooking 1; carelessness 1; unknown 1.
Ship (Steam) Builders	..	1	..	..	1	1	Trade 1.
Ship Chandlers	..	3	1	1	3	4	Candle 1; trade 2; unknown 1.
Shot Manufacturers	..	1	..	..	1	1	Trade 1.
Snuff Mills	1	..	..	..	1	1	Stove 1.
Soot Merchants	..	1	8	..	9	9	Fire in soot 1; trade 3; candle 1; flue 1; curtain 1; unknown 2.
Spice Merchants	..	..	1	1	..	1	Bleaching spice 1.
Stables	11	43	59	9	104	113	Flue 6; candle 25; repairs 2; dung overheating 6; heating pitch 1; laboratory adjoining 1; accident 9; copper 1; incendiarism 1; smoking tobacco 3; lucifers 1; charcoal stove 1; stove 1; fireworks 1; children 2; defect in wall 1; pipe stove 1; unknown 50.
Starch-makers	..	3	..	..	3	3	Trade 2; unknown 1.
Steam-boiler-makers	..	4	..	1	3	4	Trade 1; unknown 3.
Sugar-refiners	3	4	4	1	10	11	Flue 2; packing 1; trade 3; unknown 5.
Straw-bonnet-makers	..	1	4	3	2	5	Trade 2; unknown 3.
Steam Mills	1	..	..	..	1	1	Trade 1.

List of Fires which took place in London in Ten Years, from 1833 *to* 1842.—continued.

TRADES.	Totally Destroyed	Considerably Damaged.	Slightly Damaged.	Gas.	No Gas.	Total.	CAUSES.
Tailors	1	19	22	23	19	42	Stopped up flue 1; gas 7; trade 4; candle 7; flue 2; curtain 2; pipe stove 1; stove 1; incendiarism 1; unknown 16.
Tanners	..	8	4	..	12	12	Over-heating 1; tan over-heating 4; trade 2; steam-engine 2; unknown 3.
Tallow Chandlers, Melters, Wax Chandlers, and Soap-boilers.	6	11	20	9	28	37	Trade 23; gas 1; flue 3; unknown 10.
Tarpaulin-makers	2	1	..	..	3	3	Trade 1; unknown 2.
Theatres	1	..	9	9	1	10	Gas 6; trade 1; fireworks 1; smoking tobacco 1; unknown 1.
Tinmen, Braziers, and Smiths	4	15	36	19	36	55	Lime over-heating 1; trade 29; stove 1; steam-boiler bursting 1; flue 1; pipe stove 1; candles 2; spark 1; unknown 18.
Type-founders	..	..	1	1	..	1	Trade 1.
Tobacco Manufacturers	..	5	3	7	1	8	Trade 2; candle 1; gas 2; unknown 3.
Tobacconists	..	4	6	10	..	10	Lucifers 4; candle 2; smoking tobacco 1; gas 1; unknown 2.
Toy Warehouses	..	2	..	1	1	2	Unknown 2.
Turpentine Distillers	2	..	..	..	2	2	Trade 2.
Victuallers	12	87	219	274	44	318	Gas 42; flue 65; curtain 43; trade 9; stove 10; smoking tobacco 19; spirit lamp 1; candle 17; tar boiling over 1; pipe stove 3; fire on hearth 2; fumigation 2; spark 3; lucifers 3; airing a bed 1; children playing with lucifers 1; naptha 1; cutting away party wall 1; oven adjoining 1; unknown 93.
Vitriol Works	..	..	1	..	1	1	Trade 1.
Varnish-makers	2	4	2	..	8	8	Trade 8.
Vinegar Works	..	1	2	..	3	3	Trade 1; Pitch boiling over 1; stove 1.
Under repair, and building	2	15	32	6	43	49	Repairs 15; flue 5; candle 1; trade 15; gas 1; fire on hearth 5; lime over-heating 1; stove 1; carelessness 1; unknown 4.

Unoccupied	4	11	30	6	39	45	Flue 6; incendiarism 6; curtain 1; fire on hearth 2; gas 2; candle 1; smoking tobacco 2; children 3; spontaneous ignition 1; trade 1; repairs 1; lucifers 1; burning a straw bed 1; unknown 17.
Upholsterers	1	5	10	10	6	16	Candle 1; gas 1; trade 3; pipe stove 1; hot water stove 1; curtain 1; smoking tobacco 1; unknown 7.
Wadding-makers	1	8	2	..	11	11	Stove 1; trade 8; incendiarism 1; unknown 1.
Warehouses	3	12	30	16	29	45	Stove 2; flue 5; pitch boiling over 1; floor falling 1; incendiarism 6; spark from fire 1; trade 1; candle 2; rags over-heating 3; cotton waste 2; shoddy over-heating 2; lighting gas 1; unknown 18.
,, (Manchester)	..	1	10	7	4	11	Pipe stove 1; flue 5; gas 1; carelessness 1; incendiarism 1; unknown 2.
Waterproof Canvass-makers	..	1	..	..	1	1	Unknown 1.
Weavers (Carpet)	..	..	1	..	1	1	Candle 1.
,, (Silk)	1	3	5	2	7	9	Unknown 4; curtain 1; trade 1; candle 3.
,, (Willow)	..	1	1	..	2	2	Cat 1; Unknown 1.
Wine and Spirit Merchants	..	12	42	12	42	54	Straw in cellar 3; stove 1; packing 2; trade 37; gas 6; flue 1; unknown 3; incendiarism 1.
Wharfingers	..	..	1	..	1	1	Rags over-heating 1.
Wood Merchants	..	4	2	2	4	6	Gas 1; spark 1; sewing by candle-light 1; unknown 3.
Wool Staplers	..	1	1	..	2	2	Unknown 2.
Workhouses	..	6	7	6	7	13	Hearth decayed 1; curtain 2; stove 1; flue 2; gas 1; stove for drying linen 1; spark from fire 1; trade 1; unknown 2; cooking apparatus 1.
	269	1,611	3,894	2,142	3,632	5,774	
	False alarms . 691 Chimney ditto. 1,034					1,725	
						7,499	

(Signed) JAMES BRAIDWOOD, Superintendent.

MISCELLANEOUS.

South Australia.—The colony of South Australia embraces the territory comprised between the 132nd and 141st degrees of east longitude, and extends from the sea coast on the southward to the 26th degree of south latitude. Of the greater portion of this extensive country nothing is as yet known. The peninsula formed by St. Vincent's and Spencer's Gulfs on the west, and Lake Alexander and the Murray on the east, (the western boundary extending from Cape Jervis in latitude about 36° 20″ to the head of Spencer's Gulf in latitude about 32½°, and the eastern boundary extending from Cape Jervis to the great bend of the Murray in latitude 34°),—Yorke's Peninsula, between Spencer's and St. Vincent's Gulfs,—and the peninsula of Eyria, the boundaries of which extend from Sleaford Bay, in a northerly and easterly direction as far as the head of Spencer's Gulf, and in a northerly and westerly direction as far as Streaky Bay,—are the only portions of the province which have as yet been explored, and the latter of these is still only very imperfectly known.

The settlement of the colony has not, excepting a few hundred persons at Port Lincoln, yet extended beyond the peninsula formed by the Murray and the gulf; nor, considering the vast extent of available country still unappropriated, is it likely to do so for some years. From Adelaide as far as Lake Alexandrina on the east, and Encounter Bay and Cape Jervis on the south, lies a fine extent of country, consisting alternately of rich alluvial vallies, and mountain ranges of grassy forest. The only rivers of any consequence that empty themselves into the sea, which forms the western boundary of this country, are the Sturt and the Onkaparinga rivers, and several smaller streams. On the east the Bremer, Angus, Finniss, Inman, Hindmarsh, and other streams, disgorge into the Lake and Encounter Bay.

The census of 1842 exhibits a return of 14,625 souls; but as no returns have been made for many remote districts, and as no allowance has, notwithstanding, been made for omissions, it is believed that the actual population of the province is not at this time under 16,000 souls.

Taking the above return as the basis of our calculations, the male population of the province is nearly as one and a half to one of the females, a state of things which accounts in some degree for the scarcity of female servants. Taking the present population of the province at 16,000, and the land selected in the province at 320,000 acres, an allowance of 20 acres of land must be made for every man, woman, and child in the province, independent of the thousands of acres which are at present grazed upon, although not selected, or even surveyed.

Upon the calculation of 20 acres of land for every man, woman, and child in the province, there is at the present moment sufficient land surveyed to accommodate a population of 32,000 souls; that is, a population twice its present amount.

The number of children in the province under seven years of age are not given in the above census, but they may be set down at 3,000, and, in the past year, the births may be calculated at rather more than three times the amount of the deaths.

The farmers have found great difficulty in getting in the harvest this

year, from want of hands; and as 200 additional shepherds will be wanted almost immediately, there are not a sufficient number of labourers in the colony for the requirements of the ensuing year, by nearly 1,000. It is hoped, therefore, that the friends of the colony in England will impress upon the Colonial Office the necessity for the speedy renewal of emigration.

Turnpike Trusts.—From the Report of the Commissioners appointed to inquire into the subject, it appears that for every 200 miles of turnpike road, there are, on an average, ten surveyors; whereas, if the highways and turnpike trusts were consolidated, one properly qualified surveyor might perform much better the service with which the ten are charged. There are, it appears, 1,116 turnpike trusts, comprehending about 22,000 miles. The officers employed consist of 1,120 treasurers, 1,135 clerks, and 1,300 surveyors: total 3,555. The annual cost of the *repair* of the turnpike roads is 51*l.* per mile, making a total expenditure of 1,122,000*l.* per annum. The debts amounted to upwards of 9,000,000*l.*, and they appeared to be rapidly increasing. The average expense of the *management* of the highway and turnpike roads is estimated at 10*l.* per mile per annum; but it is calculated that if the management of the turnpikes and highways were consolidated, they might be better managed at an expense of from 30*s.* to 2*l.* per mile per annum. On comparing the actual expense of the repairs of roads under a scientific management of the highways with the common cost, it appears probable that by management on an extended and appropriate scale, upwards of 500,000*l.* per annum might be saved on that branch of administration alone.

The Committee of the House of Commons, which sat in 1834, examined some of the most able engineers in the country; and a Commission subsequently appointed, at the head of which were the Duke of Richmond and the Marquis of Salisbury, coincided in recommending the adoption of the principle of consolidation as the only means of retrieving that branch of administration.—*Report on the Sanitary Condition of the Labouring Population of Great Britain*, p. 325.

Private and Joint-Stock Banks.

An Account of the Number of Private and Joint-Stock Banks registered in each Year from 1820 *to* 1842, *both inclusive.*

Year.	Number of Private Banks.	Number of Joint Stock Banks.	Year.	Number of Private Banks.	Number of Joint Stock Banks.
1820 to 1821	521	..	1831 to 1832	424	25
1821 to 1822	526	..	1832 to 1833	416	35
1822 to 1823	547	..	1833 to 1834	416	47
1823 to 1824	547	..	1834 to 1835	411	55
1824 to 1825	544	..	1835 to 1836	407	100
1825 to 1826	554	..	1836 to 1837	351	107
1826 to 1827	465	6	1837 to 1838	341	104
1827 to 1828	456	7	1838 to 1839	332	108
1828 to 1829	460	11	1839 to 1840	332	113
1829 to 1830	439	15	1840 to 1841	321	115
1830 to 1831	436	19	1841 to 1842	311	118

[Parl. Paper, No. 85, Session 1843.]

Slave Trade Police.—A Return of the Number of Ships of War, of all Classes, employed for the Suppression of the Slave Trade in the Year 1842; *stating the Number of Guns and of Men.*

CLASS.	Number of Ships.	Number of Guns.	Number of Men.
3rd rate	1	72	620
4th rate	4	202	1,900
5th rate	2	88	720
6th rate	5	130	1,085
Sloop	19	310	2,550
Steam-vessel	8	26	686
Gun-brig	19	117	993
Total	58	945	8,554

This Return is made for the 1st of July, as an average of the force employed for the whole of the year 1842; but although the above number of vessels were furnished with Slave-Trade Instructions, yet they were only employed in cruising against Slave Vessels as the other duties of the stations on which they were respectively employed would permit.

Yeomanry Cavalry.—This is a force almost exclusively confined to England. The Irish Yeomanry were disbanded on the 31st of March, 1834: and in Scotland there are only the Ayrshire corps and that of the Upper Ward of Lanarkshire; the former containing 6, and the latter 4 troops, with 38 officers and 750 men, maintained at an expense of 4,190*l.* 1*s.* 6*d.* But in England there are 53 corps, comprising 228 troops: 9 of these corps, comprising 11 troops, serve gratuitously, and do not make any returns of their effective strength to the War Office: but the other 44 comprise in their 217 troops 12,684 men, and their cost to the government, in 1841, was 78,179*l.* 4*s.* 7*d.*, making the total cost of the English and Scotch Yeomanry 82,369*l.* 6*s.* 1*d.*, including 272*l.* 18*s.* for the pay and travelling expenses of officers employed to inspect them.—(*Parl. Pap.*, *Sess.* 1842, *No.* 300)

Religious Instruction, Ireland.—Prefixed to a recent return to an order of the House of Commons (1843, No. 588) is a summary, from which it appears that the total number of schools in operation in Ireland under the National Board of Commissioners of Education was, on the 30th of April, 1843, no fewer than 2,751, of which 2,614 have made returns of the course of religious instruction pursued in them during the four months preceding. In 492 of these National Schools the Holy Scriptures were read, daily or occasionally, without the selected "Scripture Lessons;" in 592 both the Holy Scriptures and the "Scripture Lessons" were read: making a total of 1,084 in which the Holy Scriptures have been read daily or occasionally. The number of schools in which the "Scripture Lessons" published by the Commissioners have alone been read was 855, making 1,447 in which these lessons were used; while the number in which neither the Scriptures nor the "Scripture Lessons" were read was 815. By another return of the same session (520) it appears, that 137 were on sites belonging or attached to Roman Catholic religious edifices.

Tenth Report of the Manchester Statistical Society, established in 1833.—*October*, 1843.

The Annual Meeting of the Society was held in the Chamber of Commerce, when Officers for the ensuing Session were appointed.

The thanks of the Society were voted to the Directors of the Chamber of Commerce, for their kindness in allowing the use of their room for the Meetings of the Society.

At subsequent Meetings, during the Session, the following communications were made :—

On the Medical Inspection of Towns and the Registration of the Causes of Death.—Mr. P. H. Holland.

On Early Marriages in Oriental Countries as being no evidence of Early Puberty.—Mr. Roberton.

A Committee was appointed to report on the Expenditure of the Public Charities in Manchester during the last five years, which has not yet reported.

In pursuance of a Resolution of the Society passed at the Meeting of the 9th of May, the Secretaries advertised for an Agent to undertake a new inquiry into the state of Education in the Boroughs of Manchester and Salford, but owing to the excited state of the public mind upon this subject, it was considered desirable to postpone entering upon the inquiry.

The Committee on the Registration of Births, Deaths, and Marriages, for the Districts of Manchester and Salford, have been actively engaged in abstracting and classifying the entries in the Registrar's books, and from the continuance of their labours a most valuable mass of information is in process of collection and arrangement.

During the past Session, three Ordinary Members have been elected.

PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

Eighth Ordinary Meeting, June 17, 1844.

Lieut.-Colonel Sykes, V.P., in the Chair.

The following gentlemen were elected :—

Thomas Hodgkin, M.D. William Humphry Freeland, Esq.
Alfred Rhodes Bristow, Esq.

The following gentlemen were proposed as candidates for admission into the Society :—

Julius Jeffreys, Esq. | Gregory Seale Walter, Esq.
B. Smith, Esq., M.P. | A. A. Knox, Esq.

A paper, by Mr. Hutchinson, was read, entitled "Contributions to Vital Statistics, obtained by means of a Pneumatic Apparatus for valuing the Respiratory Powers with relation to Health."—See p. 193.

BILLS OF MORTALITY.

The quarterly returns are obtained from 115 districts, sub-divided into 576 Sub-districts. *Thirty-four* districts are placed under the metropolis, and the remaining 81 districts comprise, with some agricultural districts, the principal towns and cities of England. The population was 6,578,912 in 1841.

The deaths registered in the last quarter (ending June 30th) amounted to 38,925, which is less by 7116 than the deaths in the previous quarter, and 1283 less than the average of the corresponding Spring quarter in the 5 years (1838–42). Allowing for the increase of the town population, the mortality was 10 per cent. below the average of the season.

The reduction in the mortality has been unequally distributed over the kingdom; but as a general rule, it has been most remarkable in the large manufacturing districts.

	Average of 5 previous Spring Quarters, 1838–42.	Deaths in the Quarter ending June 30, 1844.
Manchester	1543	1260
Salford	519	417
Ashton and Oldham	1377	993
Leeds	1107	936
Sheffield	577	464
Stockport	630	418
Liverpool	1744	1547

Birmingham remained the same; and in a few of the other manufacturing districts, to be shortly mentioned, the mortality was above their average.

Small-pox and *Scarlatina* have been epidemic in the metropolis; and towards the end of the quarter, 51 persons (chiefly children) died of the former, 78 of the latter disease in one week, The deaths in the quarter from *small-pox* were 425. 107 of the number were reported by the informants to have been vaccinated; but the evidence of this would necessarily be, in many cases, uncertain and imperfect. Influenza has declined; and since the mean temperature has risen above 60 degrees, bowel complaints have become more prevalent.

The epidemics most frequently mentioned in the country districts are scarlatina, measles, small-pox, hooping-cough, and typhus.

The quarterly meteorological table has been compiled from the weekly tables supplied by the astronomer royal. The mean temperature (55° 0′) was 1° 9′ above the average of the season; the highest temperature of the air (observed) was 83° 3′, the lowest 34°; the thermometer once rose in the sun to 111° 7′, and fell on the grass so low as 21° 6′. The mean *dew point* was 47° 2′. The quarter has been remarkable for the small quantity of rain which fell. The rain collected in 13 weeks was only 2·31 inches, and of this 1·55 inches fell upon the last week of June.

The results of some meteorological observations by M. P. Moyle and Lovell Squire, Esqs., are given in another page. The publication of the results of a series of simultaneous meteorological observations, made on an uniform plan in different parts of the kingdom, could not fail to be highly interesting.

Districts in which the mortality was HIGHER *than the average mortality of the Spring Quarter in the same districts.*—The south districts of the Metropolis, *Portsea Island*, *Northampton*, Bedford, Clifton, Stroud, Hereford, Kidderminster, West Derby, Wigan, *Bradford*, *Merthyr-Tydfil*.

Districts in which the Mortality was lower than the average Mortality of the Spring quarter in the same districts.—Brighton, Oxford, *Norwich*, Dorchester, Bristol, *Worcester*, Wolverhampton, *Stockport*, Macclesfield, *Great Boughton* (Chester), *Liverpool*, Preston, Bury, Bolton, *Prescott*, *Manchester*, *Salford*, *Ashton*, *Sheffield*, Huddersfield, *Leeds*, York, *Sunderland*, Tynemouth, Newcastle-on-Tyne, *Pontypool*, Newtown, Anglesey.

MORTALITY OF THE COUNTRY.

Quarterly Table of the Mortality in 115 *of the Districts of England (including the principal Towns) showing the Number of Deaths registered in the Six Years, the Average Number of Deaths in the Five Springs,* 1838-42, *and the Number of Deaths in the Spring Quarter of* 1844, *ending* 30*th June.*—(*Continued from p.* 183.)

DISTRICTS.	Population 1841.	Annual Deaths Registered. 1838	1839	1840	1841	1842	1843	1838–42 Quartly. Average† Of Five Years.	Of Five Springs.	Deaths in the Spring Quarter, ending June 30, 1844.
*Metropolis.**										
West Districts .	301,326	8,114	6,538	6,936	6,599	6,826	7,214	1,751	1,738	1,802
North Districts.	366,303	8,944	7,890	8,594	8,261	8,550	9,038	2,112	2,004	2,191
Central Districts	374,759	10,844	9,751	9,108	9,333	8,873	9,547	2,395	2,255	2,044
East Districts .	393,247	12,434	10,359	10,063	10,004	9,947	10,960	2,640	2,417	2,433
South Districts.	479,469	13,210	11,562	12,329	11,872	11,918	12,575	3,044	2,686	3,001
Total . .	1,915,104	53,546	46,100	47,030	46,069	46,114	49,332	11,943	11,101	11,471
South Eastern Division.										
Maidstone . .	33,210	737	726	700	648	815	774	181	184	202
Brighton . .	46,742	916	898	980	1,102	1,126	1,117	251	230	219
Isle of Wight .	42,547	655	630	737	891	721	703	182	193	191
Portsea Island .	53,036	1,264	1,180	1,140	1,211	1,152	1,342	297	271	363
Winchester . .	23,044	421	479	526	416	469	471	116	113	117
Windsor . . .	20,502	381	367	402	395	394	314	97	94	98
South Midland Division.										
St. Albans . .	17,051	378	310	331	300	340	291	83	89	73
Wycombe . .	34,150	788	692	824	751	679	748	187	210	229
Oxford . . .	19,701	359	407	406	450	414	359	102	94	77
Northampton .	28,103	689	687	670	693	622	677	168	165	224
Bedford . . .	31,767	676	678	743	714	604	762	171	172	200
Cambridge . .	24,453	563	547	639	659	465	597	144	144	155
Eastern Division.										
Colchester . .	17,790	533	437	488	381	417	393	113	107	105
Ipswich . . .	25,254	694	630	593	499	594	551	150	144	161
Norwich . . .	61,846	1,373	1,852	1,752	1,362	1,582	1,295	396	430	342
Yarmouth . .	24,031	417	440	504	493	516	510	118	115	127
South Western Division.										
Devizes . . .	22,130	426	510	481	429	449	633	115	111	118
Dorchester . .	23,380	469	362	412	456	437	524	107	118	95
Exeter . . .	31,333	700	646	808	920	764	836	192	178	186
St. Thomas . .	47,105	824	819	888	859	886	808	214	201	220
Plymouth . .	36,527	862	670	765	730	1,141	889	208	196	209
Redruth . . .	48,062	914	909	1,011	906	1,232	845	249	252	243
Penzance . .	50,100	762	848	976	1,016	1,128	996	236	226	221
Bath . . .	69,232	1,567	1,602	1,974	1,728	1,598	1,624	423	436	433
Western Division.										
Bristol . . .	64,298	1,842	1,675	2,330	1,895	1,771	1,742	476	462	424
Clifton . . .	66,233	1,328	1,150	1,739	1,519	1,510	1,256	362	368	427
Stroud . . .	38,920	952	693	760	728	706	808	192	205	244
Cheltenham .	40,221	869	726	855	890	1,078	824	221	217	191
Hereford . .	33,646	774	687	758	688	862	816	188	182	207
Shrewsbury . .	21,529	568	514	559	520	586	534	137	143	140
Worcester . .	27,130	805	717	638	614	637	641	171	166	129
Kidderminster .	29,408	591	523	670	582	621	597	149	137	169
Dudley . . .	86,028	1,767	1,891	2,022	2,296	2,332	1,729	515	497	468
Walsall . . .	34,274	619	749	913	832	927	706	202	183	174
Wolverhampton	80,722	1,556	1,909	2,217	2,153	2,319	1,783	508	506	457
Wolstanton . .	32,669	710	795	831	757	964	842	203	210	202
Birmingham .	138,187	3,359	3,639	3,767	3,673	3,579	3,340	901	845	869
Aston. . . .	50,928	1,099	1,058	1,218	1,113	1,093	1,081	279	275	298
Coventry . .	31,028	684	724	616	905	290	838	191	181	199

* The deaths in the Metropolis for the years 1840-1-2 have been derived from the weekly tables, the Returns for each year comprising 52 weeks, or 364 days. The last quarter in the metropolis ended June 29, 1844. The returns from other places are for the years ending December 31, and the quarter ending June 30.

† Wandsworth District is included in the return for the Metropolis.

A Quarterly Table of the Mortality, &c.—continued.

DISTRICTS.	Population 1841.	Annual Deaths Registered. 1838	1839	1840	1841	1842	1843	1838–42 Quartly. Average* Of Five Years.	Of Five Springs.	Deaths in the Spring Quarter ending June 30, 1844.
North Midland Division.										
Leicester . .	50,932	1,170	1,291	1,730	1,358	1,457	1,255	350	326	344
Lincoln. . .	36,110	620	731	817	800	720	786	184	194	180
Nottingham .	53,080	1,209	1,540	1,794	1,239	1,429	1,333	361	315	327
Basford. . .	59,634	1,045	1,200	1,549	1,163	1,245	1,216	310	322	359
Derby . . .	35,015	769	832	926	914	909	922	217	208	209
North Western Division.										
Stockport . .	85,672	2,410	2,591	2,574	2,048	2,073	2,203	585	630	418
Macclesfield .	56,018	1,315	1,528	1,745	1,419	1,403	1,551	370	394	338
Great Boughton (including Chester) . .	49,085	1,040	1,237	1,384	1,246	1,189	1,091	305	315	237
Liverpool . .	223,054	6,627	7,435	8,470	7,556	7,407	7,458	1,875	1,744	1,547
West Derby (adjoining Liverpool) .	88,652	1,625	1,746	2,206	2,202	2,405	2,312	509	455	526
Blackburn .	75,091	1,612	2,190	2,140	1,692	1,665	2,031	465	492	461
Preston. . .	77,189	1,726	1,812	2,637	2,026	2,050	1,938	513	502	464
Rochdale . .	60,577	1,477	1,673	1,868	1,417	1,476	1,531	396	426	406
Bury . . .	77,496	1,901	1,990	2,170	2,064	1,987	1,832	506	543	495
Bolton . . .	97,519	2,432	2,857	2,900	2,572	2,607	2,596	668	672	616
Wigan . . .	66,032	1,483	1,912	2,144	1,561	1,588	1,852	434	447	486
Prescott . .	43,739	916	1,056	1,155	997	1,075	920	260	272	183
Chorlton . .	93,736	2,140	2,418	2,399	2,431	2,427	2,529	591	535	540
Manchester .	192,408	6,706	6,774	6,489	5,821	6,151	6,263	1,597	1,543	1,260
Salford . . .	70,228	2,207	2,449	1,998	1,971	1,977	2,098	530	519	417
Ashton . . .	173,964	4,488	5,489	4,873	4,282	4,786	4,391	1,196	1,377	993
York Division.										
Sheffield . .	85,076	2,429	2,703	2,410	2,231	2,182	2,169	598	577	464
Huddersfield .	107,140	1,847	2,080	2,243	2,122	1,996	2,451	514	620	572
Halifax. . .	109,175	2,098	2,402	2,354	2,202	2,272	2,459	566	586	606
Bradford . .	132,164	3,093	3,251	3,176	3,041	3,323	3,344	794	803	959
Leeds . . .	168,667	4,289	4,388	4,488	4,360	4,615	4,329	1,107	1,107	936
Hull . . .	41,130	1,060	1,023	1,442	1,206	1,042	1,128	289	264	241
York . . .	47,779	876	1,217	1,206	1,039	1,133	1,048	274	292	267
Northern Division.										
Sunderland .	56,226	1,479	1,524	1,513	1,512	1,357	1,247	369	374	307
Gateshead .	38,747	881	968	1,016	989	909	984	238	211	216
Tynemouth .	55,625	1,112	1,285	1,243	1,340	1,327	1,229	315	322	268
Newcastle-on-Tyne. . .	71,850	1,829	2,117	1,957	2,104	1,726	1,922	487	469	373
Carlisle . .	36,084	855	739	901	925	840	762	213	193	199
Cockermouth .	35,676	784	718	696	674	597	690	173	160	166
Kendal . . .	34,694	729	825	821	601	714	666	184	198	188
Welsh Division.										
Abergavenny .	50,834	1,150	1,206	1,374	1,458	1,109	1,116	315	357	332
Pont-y-pool .	25,037	561	615	563	648	545	514	147	170	99
Merthyr Tydvil	52,864	1,516	1,246	1,566	1,423	1,110	1,183	343	360	560
Newtown . .	25,958	537	468	619	539	420	477	129	144	117
Wrexham . .	39,542	845	823	966	900	809	917	217	227	221
Holywell . .	40,787	897	791	864	800	738	815	204	222	209
Anglesey . .	38,105	645	589	632	597	624	575	154	173	142
Total exclusive of the Metropolis	4,663,808	109,321	116,505	124,664	114,664	115,834	113,869	29,049	29,107	27,454
Grand Total	6,578,912	162,867	162,605	171,694	160,733	161,948	163,201	40,992	40,208	38,925

* Wandsworth District is included in the return for the metropolis.

MORTALITY OF THE METROPOLIS.

Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, registered in the 13 *Weeks ending* 29*th June,* 1844.

CAUSES OF DEATH.	Quarterly Average of Deaths in the Five Springs of 1839-43.	Deaths in the Spring Quarter ending June 29, 1844.
L Causes	10,960	11,471
ECIFIED Causes	10,912	11,432
I. Zymotic (or Epidemic, Endemic, and Contagious) Diseases	1,993	2,451
SPORADIC DISEASES.		
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat	1,300	1,209
II. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	1,887	2,006
V. Diseases of the Lungs and of the other Organs of Respiration	3,340	3,229
V. Diseases of the Heart and Blood Vessels	260	378
VI. Diseases of the Stomach, Liver, and other Organs of Digestion	755	847
II. Diseases of the Kidneys, &c.	68	94
II. Childbirth, Diseases of the Uterus, &c.	108	99
X. Rheumatism, Diseases of the Bones, Joints, &c.	77	82
X. Diseases of the Skin, Cellular Tissue, &c.	14	12
I. Old Age	795	673
I. Violence, Privation, and Intemperance	314	352
I. Small Pox	144	425
Measles	355	208
Scarlatina	325	601
Hooping Cough	438	361
Croup	99	126
Thrush	49	42
Diarrhœa	59	83
Dysentery	12	18
Cholera	5	9
Influenza	25	28
Ague	3	3
Remittent Fever	6	4
Typhus	400	455
Erysipelas	65	68
Syphilis	8	19
Hydrophobia	1	1
I. Inflammation	81	7
Hæmorrhage	40	42
Dropsy	411	333
Abscess	42	20
Mortification	55	46
Purpura	3	3
Scrofula	29	43
Cancer	106	170
Tumor	19	7
Gout	13	19
Atrophy	76	137
Debility	239	236
Malformations	12	22
Sudden Deaths	173	124

CAUSES OF DEATH.	Quarterly Average of Deaths in the Five Springs of 1839-43.	Deaths in the Spring Quarter ending June 29, 1844.
III. Cephalitis	164	153
Hydrocephalus	461	497
Apoplexy	209	294
Paralysis	189	213
Convulsions	670	614
Tetanus	4	7
Chorea	2	2
Epilepsy	50	55
Insanity	12	18
Delirium Tremens	22	29
Disease of Brain, &c	106	124
IV. Laryngitis	7	17
Quinsey	18	23
Bronchitis	130	194
Pleurisy	23	19
Pneumonia	813	715
Hydrothorax	54	67
Asthma	198	161
Phthisis or Consumption	1,919	1,838
Disease of Lungs, &c	178	195
V. Pericarditis	11	29
Aneurism	9	14
Disease of Heart, &c.	240	335
VI. Teething	205	165
Gastritis	193	11
Enteritis		169
Peritonitis	17	29
Tabes Mesenterica	61	125
Worms	3	6
Ascites	9	17
Ulceration (of Intestines, &c.)	15	9
Hernia	22	23
Colic or Ileus	22	32
Intussusception	5	7
Stricture	7	3
Hæmatemesis	6	10
Disease of Stomach, &c.	50	74
Disease of Pancreas	..	1
Hepatitis	13	22
Jaundice	26	39
Disease of Liver, &c.	99	105
Disease of Spleen	1	..
VII. Nephritis	5	9
Ischuria	2	..
Diabetes	4	3
Cystitis	3	2
Stone	5	5
Stricture	6	16
Disease of Kidneys, &c.	44	59
VIII. Childbirth	78	67
Paramenia	2	3
Ovarium Dropsy	3	6
Disease of Uterus, &c.	24	23
IX. Arthritis	1	1
Rheumatism	34	27
Disease of Joints, &c.	43	54
X. Carbuncle	1	..
Phlegmon	1	2
Ulcer	4	7
Fistula	5	1
Disease of Skin, &c.	4	2
XI. Old Age	795	673
XII. Intemperance	7	13
Privation	3	6
Violent Deaths	304	333
Causes not specified	48	39

PRICES OF PROVISIONS,

Average Contract Prices of the Provisions and Fuel supplied to the Workhouses

Districts marked out by the Registrar-General, and Central Unions contained therein.	Average Weekly Cost per Head of In-door Paupers. Food.		Clothing.	Food and Clothing.		Wheaten Flour per Stone.		Wheaten Bread per 4 lbs.	Meat—Beef and Mutton per lb.	Salt Butter per lb.	Cheese per lb.	Potatoes.
Metropolis.	s.	d.	d.	s.	d.	s.	d.	d.	d.	d.	d.	s. d.
East London	2	9¼	5¼	3	2½	2	6	6	4¼	6½	..	2 3 cwt.
Holborn	2	1	2¾	2	3¾	2	0	6	4	6¼	4	2 6 cwt.
South Eastern Counties.												
Maidstone	2	2¼	3½	2	5¾	1	9	5¼	4	7	4½	1 0 bshl.
Portsea Island	2	2	7	2	9	1	9	5¼	3½	6½	3¾	2 0 cwt.
South Midland Counties.												
Northampton	2	5¼	4½	2	9¾	2	2	5¾	3¾	13	6	1 4 cwt.
Cambridge	2	2¼	7	2	9¼	2	1	5¾	4	9	4½	1 2 bag.
Eastern Counties.												
Ipswich	2	0½	5¼	2	5¾	1	10	5½	5	10	5¾	..
South Western Counties.												
Devizes	2	0½	5¼	2	5¾	1	9	4¾	3	7½	4½	1 6 bshl.
Penzance	2	0¾	4¼	2	5	2	0	5½	4¾	7¾	10	2 3½ cwt.
Bath	2	0	2¼	2	2¼	1	9	5	3¾	8	3	5 0 sack
Western Counties.												
Stroud	1	10	1¾	1	11¾	..		5	4	7¼	3	5 0 bag.
Wolverhampton	1	11¼	6¼	2	5½	1	11½	5½	4s. 6d. per st.	8	5	1 6 bshl.
North Midland Counties.												
Derby	1	9	1¾	1	10¾	2	0	5½	4½	12	5½	4 0 cwt.
North Western Counties.												
Macclesfield	1	9	7	2	4	1	9	..	3½	10	6½	5 11 load
Bolton	1	7¾	3¾	1	11½	1	8½	5	4	7½	4¾	6 3 load
Prescot	1	10¾	12¼	2	11	..		6	3¾	8	..	2 6 90 lb.
North Eastern Counties.												
Sheffield	2	5	7	3	0	2	0	..	4¼	..	7	5 4 load
Halifax	1	10¾	1¾	2	0½	2	4	5	4¾	8½	..	0 6 load
Sculcoates	2	4	7	2	11	2	1	4½	4¼	14	..	0 5¼ peck
Northern Counties.												
Gateshead	1	9¼	4	2	1¼	2	0	4¼	4	10	6½	2 10 cwt.
Kendal	1	10¾	5¼	2	4	1	10½	..	4	9¾	5½	0 2¾ st.
Wales.												
Pembroke	1	5½	1¾	1	7¼	2	0	6	4½	7	5	2 6 cwt.
St. Asaph	1	8	3½	1	11½	..		6	3¾	9	5½	3 0 / 210 lbs.

FUEL, &c.—*(Continued from p. 187.)*
of the following Unions, during the Quarter ended at Lady-day, 1844.

Peas per quart.	Oatmeal per lb.	Candles per 12 lbs.	Yellow Soap per lb.	Coals per Ton.	Tea per lb.	Sugar per lb.	Milk per quart.	Miscellaneous Articles.
d.	*d.*	*s. d.*	*d.*	*s. d.*	*s. d.*	*d.*	*d.*	
2½	2	5 1	4¼	16 0	3 5	6	2½	Table Beer, 5*s.* barrel.
2¼	2	5 3	4½	15 9	3 3	6	..	Porter, 33*s.* barrel.
..	3	5 6	5	20 9	3 8	6	..	. . . .
2¾	3	5 2	4½	15 10½	..	..	..	. . . .
3	3¾	5 6	4¾	22 6	3 9	6½	2¾	. . . .
3	1½	5 6	4¾	22 6	..	..	..	. . . .
2¼	3½	5 8	5	19 6	..	..	..	. . . .
2¼	3¾	5 10½	5	18 6	4 2	7	..	Beer, 7*d.* gall. Bacon, 4*d.* lb
2	2¾	5 5	5	14 6	3 10	6¾	..	Fish, 12*s.* 10*d.* cwt.
2¼	3½	5 4	4	14 0	3 6	6¼	..	Rice, 17*s.* cwt.
2	..	5 6	4½	15 6	..	..	1½	Groats, 19*s.* cwt. Rice Flour, 19*s.* cwt. Bacon, 4½*d.* lb.
2	1½	5 3	5	7 0	..	..	..	Treacle, 2½*d.* lb. Rice, 2*d.* lb.
2	1½	5 6	4½	8 8	4 0	7	..	Rice, 16*s.* cwt.
2¾	2¼	5 6	4½	9 2	..	..	..	. . . .
2	2	4 9	4¾	6 4	..	..	1	Treacle, 2¾*d.* lb.
2	2¼	4 10	4¼	9 4	..	..	1¼	Bacon, 4*d.* per lb.
2¼	1½	5 3	5	6 1½	4 2½	6½	1½	Treacle, 3*s.* 3*d.* stone. Rice, 2*s.* 2*d.* stone. Coffee, 1*s.* 9*d.* lb. Tobacco, 3*s.*6*d.* lb. Porter, 11*d.* gall. Salt, 3*d.* stone.
2¼	2	5 0	5	9 6	4 5	7	8	. . . .
2	1½	5 3	5	16 0	..	..	..	. . . .
2¼	2¾	5 6	4½	4 0	4 1	6½	..	Coffee, 1*s.* 5*d.* per lb.
..	1½	5 9	5	12 11	4 2	7	0¾	Coffee, 1*s.* 6*d.* lb. Rice, 2*s.* st.
2½	3	6 6	5¼	14 5	4 8	7	1	. . . .
2½	1¼	5 10	4¾	14 0	3 6	6½	..	Rice, 2½*d.* lb.

QUARTERLY METEOROLOGICAL TABLE,

Compiled from the Weekly Tables furnished to the Registrar-General by the Astronomer Royal.

1844 Week ending		Phases of the Moon.	Mean height of the Barometer, from 72 observations, corrected and reduced to 32 deg. Fahrenheit.	THERMOMETERS. Highest during the week.	Lowest during the week.	Mean. Highest on each day, 6 observations.	Mean. Lowest on each day, 6 observations.	Mean. Difference.	Mean of 72 observations.	Dew Point. Mean of 72 results.	Self-Registering. Highest in the sun. During the week.	Highest in the sun. Mean of 7 observations.	Lowest on the grass. During the week.	Lowest on the grass. Mean of 7 observations.	Difference between the dew point temperature and air temperature. Mean of 72 differences.	Mean of the greatest on each day, 6 observations.	Mean of the least on each day, 6 observations.	Difference between the mean temperature of the week, and the mean temperature of the same week on an average of 25 years.	WIND. Pressure in lbs. on the square foot. General direction.	Greatest pressure in the week.	Mean for the week.	The amount of Horizontal movement of the air in each week.	Mean amount of Cloud, 0–10.	Rain in inches (7 days.)
			inches.																			miles.		
April	6th	3rd, full	29·607	67·0	37·0	63·3	40·4	22·9	50·9	43·2	88·7	92·7	23·5	29·9	7·7	16·4	1·3	+6·2	S.W. and E.N.E.	3·0	0·2	670	2·9	„
„	13th	9th, 3rd qr.	30·007	66·7	34·0	61·1	40·7	20·4	50·3	42·2	95·4	92·4	21·6	32·2	8·1	16·0	2·2	+4·1	W.S.W.	3·5	0·3	990	3·9	0·26
„	20th	17th, new	30·090	66·8	36·3	61·5	43·2	18·3	52·3	46·6	87·3	79·0	24·4	35·5	5·7	12·3	0·6	+6·2	S.W.	3·0	0·1	760	6·7	0·02
„	27th	24th, 1st qr.	30·016	74·6	39·3	66·0	42·5	23·5	54·3	45·0	102·0	90·9	24·5	32·6	9·4	17·1	1·4	+6·1	N. & N.N.E.	3·0	0·04	690	3·7	0·65
May	4th	2nd, full and in Perigee	30·146	67·3	35·9	61·0	41·3	19·7	51·0	43·4	93·0	85·7	24·0	31·3	7·5	15·1	0·7	−0·6	E.S.E.	3·0	0·1	960	3·1	0·02
„	11th	9th, 3rd qr.	29·785	74·1	44·3	67·8	46·0	21·8	56·7	49·0	103·7	94·1	31·7	37·1	7·0	16·7	0·9	+4·1	N.N.W.	1·5	0·1	740	6·0	0·06
„	18th	17th, new	30·039	74·6	34·6	63·3	42·0	21·3	52·1	45·2	108·2	92·7	26·5	32·6	6·9	14·0	1·6	−0·4	N.	5·5	0·6	1065	5·7	„
„	25th	25th, 1st qr.	29·911	66·8	42·8	63·9	44·9	19·0	52·9	46·7	99·3	68·6	31·2	36·0	6·2	13·2	1·9	−1·6	N.E.	10·0	1·4	1400	6·9	0·01
June	1st	May. 31st full and in Perigee	29·690	69·0	42·1	56·2	44·2	14·0	50·9	44·8	91·0	75·8	32·0	36·9	6·1	12·2	0·9	−4·1	N.N.E.	7·0	0·8	1220	5·1	0·19
„	9th	7th, 3rd qr.	29·840	74·1	43·6	70·6	50·3	20·3	59·5	50·6	99·0	93·2	36·2	42·7	8·0	17·6	2·6	+2·0	S.W.	6·0	0·2	1265	6·5	0·03
„	15th	15th, Greatest declination N.	29·941	63·1	47·5	74·5	51·7	22·8	62·7	56·5	107·1	100·0	36·0	41·0	12·2	21·1	3·2	+3·0	W.S.W.	5·0	0·6	1170	4·1	0·02
„	22nd	16th, new	29·776	79·6	46·8	70·3	52·1	18·2	60·8	52·4	108·5	94·6	34·8	43·2	8·4	15·2	2·3	+0·4	S.W.	3·5	0·2	955	6·3	0·10
„	29th	23rd, 1st qr.	..	83·3	48·0	69·0	51·0	17·2	60·5	53·6	111·7	92·4	39·0	46·6	6·9	13·9	1·1	−1·1	N.N.E.	9·0	0·04	625	8·2	1·55
Mean, Highest, or Lowest, of the 13 weeks.		..	29·919	63·3	34·6	65·4	45·5	19·9	55·0	47·2	111·7	88·6	21·6	37·0	7·8	15·4	1·6	+1·9	..	10·0	0·36	948	5·5	2·31

DEATHS registered in the Metropolis from Small Pox, Measles, Scarlatina, Hooping Cough, Typhus, Diarrhœa, Dysentery and Cholera, Influenza, Consumption, and other diseases of the Lungs; the numbers at each age,* and the total deaths† (except violent and sudden) in each of the 13 weeks ending June 29, 1844.

Week ending	Small Pox.	Measles.	Scarlatina.	Hooping Cough.	Typhus.	Diarrhœa, Dysentery, and Cholera.	Influenza.	Phthisis or Consumption.	Other diseases of the lungs.	Deaths at Three Ages (exclusive of violent and sudden Deaths.) 0 to 15.	15 to 60.	60 and upwards.	Deaths from all causes (exclusive of violent and sudden deaths.)
April 6th	21	22	35	46	33	5	4	121	136	429	275	179	889
„ 13th	21	22	31	27	39	5	6	136	121	396	286	167	850
„ 20th	20	16	32	40	41	9	2	142	120	363	270	176	810
„ 27th	31	16	35	27	36	3	3	162	93	365	304	167	836
May 4th	31	7	24	39	36	9	1	160	165	373	318	154	845
„ 11th	27	9	35	26	35	13	3	134	107	336	299	152	783
„ 18th	30	16	41	33	30	6	2	138	165	397	273	166	837
„ 25th	36	23	49	27	32	8	4	136	163	427	262	160	857
June 1st	31	14	63	20	32	8	0	142	104	395	264	172	853
„ 9th	49	22	56	16	32	7	1	152	97	417	392	164	884
„ 15th	47	13	62	20	27	10	1	136	111	397	286	149	832
„ 22nd	30	21	76	22	36	12	1	125	108	434	292	141	858
„ 29th	51	19	60	13	39	15	0	146	81	445	271	158	875
Mean, Highest, or Lowest, of the 13 weeks.	425	206	601	361	455	110	28	1836	1391	5172	3712	2113	11014

* The ages of 17, on account of the corrections for returns not received, were not specified in the Table.
† Inquests are held on violent and sudden deaths, which are returned irregularly.

REVENUE.

An Abstract of the Net Produce of the Revenue of Great Britain, in the Quarters and Years ended 5th July, 1843 *and* 1844; *showing the Increase or Decrease thereof.*—(*Continued from p.* 188.)

Sources of Revenue.	Quarters ended 5th July,			
	1843	1844	Increase.	Decrease.
	£.	£.	£.	£.
Customs—				
Consolidated Duties .	3,304,473	3,802,521	..	..
Sugar Duty applicable to Consolidated Fund .	1,252,733	1,066,714	..	..
Ditto Ditto to Supplies .	..	..	..	..
Total Customs . .	4,557,206	4,869,235	312,029	..
Excise	3,030,113	3,115,592	85,479	..
Stamps	1,659,010	1,705,033	46,023	..
Taxes	1,984,831	1,989,874	5,043	..
Property Tax	861,709	752,485	..	9,224
Post-Office	145,000	155,000	10,000	..
Crown Lands	32,500	30,000	..	2,500
Miscellaneous . . .	1,063,524	422,187	..	641,337
Total Ordinary Revenue .	13,333,893	13,039,406	458,574	653,061
Imprest and other Moneys	67,180	49,018	..	18,162
Repayments of Advances.	138,207	274,557	36,350	..
Total Income . .	13,539,280	13,362,981	494,924	671,223
Amount applied to Consolidated Fund, exclusive of Advances . .	6,442,506	8,994,078	Deduct Increase	494,924
Ditto applied as Advances	191,501	177,276	Decrease on the Quarter	176,299
Ditto as part of the Ways and Means of the Year.	6,905,273	4,191,627		
Total	13,539,280	13,362,981		

Sources of Revenue.	Years ended 5th July,			
	1843	1844	Increase.	Decrease.
	£.	£.	£.	£.
Customs	18,934,809	19,770,158	835,349	..
Excise	11,545,529	11,965,602	420,073	..
Stamps	6,445,370	6,518,063	72,693	..
Taxes	4,191,129	4,197,516	6,387	..
Property Tax	3,317,997	5,247,663	1,929,666	..
Post-Office	598,000	632,000	34,000	..
Crown Lands	120,000	145,000	25,000	..
Miscellaneous. . . .	1,647,541	493,140	..	1,154,401
Total Ordinary Revenue .	46,800,375	48,969,142	3,323,168	1,154,401
Imprest and other Moneys	302,254	187,703	..	114,551
Repayments of Advances.	677,713	1,063,833	386,120	..
Total Income . . .	47,780,342	50,220,678	3,709,288	1,268,952
Amount applied to the Consolidated Fund, exclusive of Advances .	32,110,389	35,013,579	1,268,952	Deduct Decrease.
Ditto applied as Advances	506,506	848,777	2,440,336	Increase on the Year.
Ditto as part of the Ways and Means of the Year.	15,163,447	14,358,322		
Total	47,780,342	50,220,678		

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign and Colonial Wheat, during each week of the Second Quarter of 1844; *together with the Average Prices for the whole Quarter.—**(Continued from p.* 190.)

Returns received at the Corn Office, 1844.	Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.	Date of Certificates of preceding Prices, regulating Duties for the Week ensuing.	Duties on Wheat per Quarter.	
	Weekly Average.	Aggregate Average of Six Weeks, regulating Duty.	Weekly Average.	Weekly Average.	Weekly Average.	Weekly Average	Weekly Average.		From Foreign Countries.	From British Possessions out of Europe.
Weeks ended 1844	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		s. d.	s. d.
April 6 .	55 5	56 1	32 10	20 1	33 9	30 11	31 8	April 11	16 0	3 0
13 .	55 1	55 11	33 1	20 1	32 4	31 2	32 5	18	17 0	4 0
20 .	55 4	55 10	32 10	20 2	32 3	31 3	31 5	25	17 0	4 0
27 .	55 6	55 8	32 7	20 1	31 2	31 4	30 8			
								May 2	17 0	4 0
May 4 .	55 3	55 6	31 8	20 1	30 11	31 9	31 2	9	17 0	4 0
11 .	55 1	55 3	31 5	20 5	31 4	32 5	32 3	16	17 0	4 0
18 .	55 10	55 4	31 1	21 0	31 2	33 3	31 8	23	17 0	4 0
25 .	55 10	55 6	30 7	21 2	31 7	33 11	31 7	30	17 0	4 0
June 1 .	55 6	55 6	30 9	21 7	34 0	34 10	33 4	June 6	17 0	4 0
8 .	55 6	55 6	31 4	21 11	33 11	35 11	34 1	13	17 0	4 0
15 .	55 9	55 7	31 10	22 6	32 4	36 11	34 1	20	17 0	4 0
22 .	55 8	55 8	32 8	22 8	34 2	37 10	35 2	27	17 0	4 0
29 .	55 9	55 8	34 0	22 9	35 0	38 0	36 1	July 4	17 0	4 0
Average of the Quarter	55 6	..	32 0	21 1	32 7	33 9	32 8	..	..	..

Foreign and Colonial Wheat and Wheat-Flour imported in each of the Months ended 5th May, 5th June, and 5th July, 1844; *the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in bond at the close of them.—**(Continued from p.* 190.)

WHEAT.

Months ended	Imported.			Paid Duty.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1844	Qrs	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.
5th May . .	67,997	64	68,061	80,816	64	80,880	238,167	117	238,284
5th June . .	246,358	3	246,361	63,319	1	63,320	411,280	119	411,399
5th July . .									

WHEAT FLOUR.

Months ended	Imported.			Paid Duty.			In Bond at the Month's end.		
	Foreign.	Colonial	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1844	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
5th May . .	42,534	996	43,530	4,733	4,349	9,082	153,624	4,695	158,319
5th June . .	42,123	1,091	43,214	658	1,678	2,336	191,969	4,106	196,075
5th July . .									

CURRENCY.

Quarterly Average of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 20th April, 18th May, and 15th June, 1844; and in the corresponding Quarters of the preceding Year.—(*Continued from p.* 191.)

Quarters ended	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
1844.	£.	£.	£.	£.	£.	£.
20th April .	21,427,000	13,615,000	35,042,000	22,150,000	16,015,000	38,165,000
18th May . .	21,393,000	13,345,000	34,738,000	21,786,000	16,010,000	37,796,000
15th June. .	21,237,000	13,483,000	34,810,000	21,916,000	15,900,000	37,816,000
1843.						
22nd April .	20,239,000	11,634,000	31,873,000	23,587,000	11,190,000	34,777,000
20th May .	19,853,000	11,154,000	31,007,000	22,696,000	11,291,000	33,987,000
17th June . .	19,521,000	10,495,000	30,016,000	21,604,000	11,472,000	33,076,000

Average Aggregate Amount of Promissory Notes which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks, by which issued in each part of the Kingdom, with the Average Amount of Bullion in the Bank of England, during the four weeks ended the 27th April, 25th May, and 22nd June, 1844, *respectively.*—(*Continued from p.* 191.)

Banks.	Circulation during the Four Weeks ended		
	27th April, 1844.	25th May, 1844.	22nd June. 1844.
	£.	£.	£.
England—Bank of England .	21,839,000	21,504,000	20,634,000
Private Banks. .	5,295,239	5,142,830	4,743,057
Joint-Stock Banks.	3,752,867	3,680,413	3,665,104
Scotland—Chartered Private & Joint-Stock Banks	2,714,627	3,041,079	3,117,988
Ireland—Bank of Ireland. .	3,625,925	3,663,500	3,488,300
Private and Joint-Stock Banks . .	2,357,446	2,241,722	2,080,277
Total . .	39,585,104	39,273,544	37,728,726
Bullion in the Bank of England	15,844,000	15,572,000	15,898,000

Consolidated Fund Operations.—The total income brought to this account in the quarter ended 5th July, 1844, was 13,377,883*l.*; the total charge was 10,219,337*l.*, leaving a surplus of 3,158,546*l.* The amount of Exchequer Bills issued to meet the charge on the Consolidated Fund for the quarter ended 5th April, 1844, and paid off out of the growing produce of that fund for the quarter ended July 5th, 1844, after deducting 300,000*l.* paid off out of the Sinking Fund, was 3,667,317*l.* The surplus of the Consolidated Fund for the quarter ended July 5th, 1844, was 1,033,081*l.*; and the probable amount of Exchequer Bills required to meet the charge on the Consolidated Fund for the quarter ended July 5th, 1844, was 4,700,398*l.*

BANKRUPTCY.

An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ended June 30, 1844; *showing the Counties and Branches of Industry in which they have occurred.* (*Continued from p.* 192.)

COUNTIES.	April.	May.	June.
Metropolis	37	31	15
Bedford	..	1	..
Berks	1	..	2
Bucks	..	..	..
Cambridge	..	2	2
Chester	..	2	1
Cornwall	..	..	..
Cumberland	1	..	1
Derby	2	1	..
Devon	1	2	..
Dorset	1	..	..
Durham	..	2	3
Essex	1	2	2
Gloucester	..	1	3
Hants	1	3	2
Hereford	1	1	1
Hertford	1	1	1
Huntingdon	..	..	..
Kent	..	2	2
Lancaster	9	11	7
Leicester	1	..	..
Lincoln	..	2	..
Middlesex (exclusive of the Metropolis)	..	1	1
Monmouth	2	1	..
Norfolk	..	1	..
Northampton	1	..	1
Northumberland	1	..	..
Nottingham	..	2	..
Oxford	..	2	3
Rutland	..	..	..
Salop	1	1	..
Somerset (including Bristol)	2	1	..
Stafford	3	5	2
Suffolk	2	3	..
Surrey (exclusive of the Metropolis)	..	3	..
Sussex	1	3	3
Warwick	4	2	3
Westmoreland	1	..	..
Wilts	..	..	..
Worcester	..	2	..
York (East Riding)	..	2	1
,, (North Riding)	..	..	..
,, (West Riding)	10	8	4
Wales	..	..	1
Total	85	101	61

TRADES.	April.	May.	June.
Agriculture and connected Trades.			
Farmers	..	1	1
Agricultural Implement Makers and Wheelwrights	..	..	..
Millers and Malsters	1	..	5
Hop Merchants	..	1	..
Brewers	3	2	..
Horse and Cattle Dealers, and Woolstaplers	1	2	1
Mining and connected Trades.			
Mining Firms	..	..	..
Blasting Works	..	..	..
Manufactures.			
Woollen Manufactures	1	3	1
Cotton ,,	1	1	1
Linen ,,	..	..	..
Silk ,,	..	1	..
Printers and Dyers	..	..	..
Lace Manufacturers	..	..	..
Hosiery ,,	..	..	..
Hardware ,,	1	4	3
Earthenware ,,	..	..	..
Glass ,,	..	..	..
Paper ,,	..	..	..
Builders	8	9	4
Miscellaneous Manufactures	11	10	5
Commerce.			
Bankers and Merchants	5	8	1
Shipowners, Warehousemen, Brokers, and Wholesale Dealers generally	10	11	10
Retail and Handicraft Trades.			
Bakers	..	1	1
Butchers	..	..	2
Corn and Hay Dealers	2	..	3
Innkeepers and Victuallers	8	12	1
Wine and Spirit Merchants	3	3	3
Dealers in Grocery, Drugs, and Spices	7	10	3
Makers of, and Dealers in, Clothing	4	4	5
Makers of, and Dealers in, Furniture	2	1	2
Coach Builders	..	..	..
Miscellaneous	17	17	9
Total	85	101	61

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

DECEMBER, 1844.

A Statistical View of the Recent Progress and Present Amount of Mining Industry in France; drawn from the Official Reports of the "Direction Générale des Ponts et Chaussées et des Mines," in continuation of a Paper read before the Statistical Section of the British Association for the Advancement of Science, at its Meeting in Newcastle in 1838. By G. R. Porter, Esq., F.R.S., Corresponding Member of the Institute of France.

[*Read before the Statistical Section of the British Association at York, September 26th,* 1844.]

At the present time, when the most strenuous exertions are being made for the advancement of the material interests of this country in all their leading branches, and while those exertions are being attended by the measure of success which usually accompanies industry directed by intelligence, it must be interesting to know whether other nations are engaged in the same pursuits, and in what degree success may have crowned their efforts also.

Our mining industry, if not the greatest, is, without doubt, one of the greatest sources of our wealth. It has been one of the chief means whereby we have been enabled to take and to maintain the station which we occupy among the nations of Europe. The knowledge of this fact has naturally led to this consequence, that other countries have striven to rival us so far as the means for such rivalry have been within their reach, and that their Governments have shown a desire to foster and encourage pursuits from which they have expected to draw results commensurate with those which have thus excited their emulation.

In no country have greater efforts to this end been made than in France. Whether the means whereby success has been sought have been the most judicious that could have been adopted on the part of the Legislature of that country is, however, very questionable.

The latest of the official documents that has been hitherto compiled having reference to the mining operations of France, relates to the year 1841, being five years in advance of the returns brought forward at the meeting of this section of the British Association in Newcastle. It will be interesting to compare the results obtained at the end of that interval of time, as an element of importance towards forming a judgment concerning the future progress of the mining industry of France. With this view, the facts will be presented as nearly as possible in the form given to the inquiry in 1838.

The system of Government inspection of the mines in France was begun in 1832, during which year, as well as in 1836 and 1841, the

value of the principal mineral productions raised in that country was as follows :—

	1832	1836	1841
	Francs.	Francs.	Francs.
Coal, lignite and anthracite .	16,079,670	26,607,071	33,159,044
Iron and Steel	87,312,994	124,384,616	141,789,560
Silver and Lead	856,673	821.534	774,033
Antimony	71,233	305,032	155,251
Copper	247,680	196,924	278,676
Manganese	105,150	152,671	147,483
Alum and Sulphate of Iron .	1,077,595	1,760,607	2,052,043
Total . . .	105,750,995	154,228,455	178,356,090
Or in sterling money .	£4,230,040	£6,169,138	£7,134,243

The actual increase of value realized from the production of these mineral substances will be seen to have been—

	Francs.	Francs.	
During 4 years, 1832 to 1836. . .	48,477,460, or	12,119,365	per annum.
During 5 years, 1837 to 1841. . .	24,127,635, or	4,825,527	per annum.
During 9 years, 1832 to 1841. . .	72,605,095, or	8,067,233	per annum.

The per centage increase in 1836 over 1832 was 45·84, or 11·46 per annum.
The per centage increase in 1841 over 1836 was 15·64, or 3·12 per annum.
And for the whole 9 years, 1841 over 1832 was 68·65, or 7·63 per annum.

Coal.

The number of coal fields (bassins houillers) which were open in 1836 was 46. This number was in 1841 increased to 62 ; of which number 9 furnished anthracite only, and 14 furnished lignite only ; the other 39 furnished bituminous coal, 5 among them yielding anthracite also. These coal-fields are situated in 41 of the 86 departments into which France is divided. They are here arranged in the order of their productiveness as given in the accounts for 1841 :—

	Tons.		Tons.
Loire	1,193,110	Poy de Dôme	10,400
Nord	893,325	Ardêche.	10,043
Saône et Loire . .	316,426	Vaucluse	8,302
Gard	274,234	Manche	6,977
Aveyron	111,379	Vendée	4,294
Bouches du Rhône. .	64,777	Aude	3,259
Allier	63,532	Alpes (Hautes).	3,167
Haute Loire . . .	51,564	Sevrès (Deux)	2,699
Calvados	51,345	Oise	2,500
Nièvre	42.880	Creuse	2,145
Mayenne	42,345	Var	1,765
Isêre	37,207	Vosges	1,684
Tarn	37,107	Corrêze	1,623
Herault	32,633	Alpes (Basses).	1,085
Sarthe	31.198	Aisne	738
Marne et Loire. . .	20,807	Rhin (Haut)	535
Loire Inférieure . .	19,347	Cantal	475
Pas de Calais . . .	19.182	Côte d'Or	258
Haute Saône . . .	17,325	Dordogne	133
Rhône	14.831	Ain	96
Rhin (Bas)	13,465		

Two departments—Moselle and Lot—which each produced a small quantity of coal in 1836, had ceased to do so in 1841. The quantity

raised in the former year was 3016 tons in Moselle, and 60 tons in Lot. On the other hand, the following departments, 13 in number, from which coal was not obtained in 1836, have since been made to yield that mineral—some of them in comparatively considerable quantity.

	Tons.		Tons.
Bouches du Rhône . .	64,777	Var	1,765
Isère	37,207	Basses Alpes	1,085
Sarthe	31,198	Aisne	738
Vaucluse	8,302	Côte d'Or	258
Manche	6,977	Ain	96
Hautes Alpes	3,167		
Deux Sevrès	2,699	Together . .	160,769
Oise	2,500		

This quantity may not appear very considerable to those who are accustomed to the magnitude of mining operations in this country; but the importance of the beginning thus made will not be undervalued, if we consider that of the 30 coal producing departments, in 1836, the aggregate quantity yielded by 22, or 11-15ths of the whole number, was less in that year than the quantity thus newly produced in the above 13 departments in 1841, and that the 20 of those 22 departments in which coal mines were worked in that year then produced very nearly double the quantity they had yielded in 1836.

The total quantity of coal, anthracite and lignite, raised in 1841 amounted to 3,410,200 tons. In 1814, the produce of all the coal mines in France was only 665,610 tons. This quantity was about doubled in 1826, the produce in that year having been 1,301,045 tons. In the following ten years this increased quantity was nearly doubled, the quantity raised in 1836 having been 2,544,835 tons. The increase during the last five years to which the statements reach has therefore been 34 per cent.; but if computed upon the produce of 1814, the difference between 1836 and 1841 amounts to 130 per cent. The increase during the whole period of 27 years has been 412 per cent. The quantities raised in each of the years above named, and the increase obtained between each period, have been as follows:—

	Quantity Raised.	Increase since 1814.	Increase since 1826.	Increase since 1836.
	Tons.	Tons.	Tons.	Tons.
1814	665,610	..	..	..
1826	1,301,045	635,435	..	..
1836	2,544,835	1,879,225	1,243,790	..
1841	3,410,200	2,744,590	2,109,155	865,365

The number of coal mines in work during 1841 was 256, showing an average production of 13,321 tons per mine. The average production in 1836 was only 9863 tons.

The number of workmen employed in raising various kinds of coal in France in 1841 was 29,320, of whom 22,595 worked in the mines. The average quantity raised to each person employed was 116 tons, being the same quantity as in 1836, when the number of persons employed was 21,913.

The value assigned in the official documents to the produce makes the cost of each ton amount in 1836 to 11*s.* 3½*d.*, and in 1841 to

only 7*s.* 9¼*d.*; the average value raised by each workman, which in 1836 amounted to 65*l.* 9*s.* 10*d.*, had therefore fallen in 1841 to 45*l.* 1*s.* 5*d.*, or nearly one-third. There are no means afforded for ascertaining in what proportion this saving has resulted from economy in the working, or from diminished wages or profits. In whatever manner the saving may have arisen, it is, however, an important fact, that the cost of production has in so short a space of time as five years been reduced to so great an extent as 30 per cent., without preventing the continued extension of this branch of employment.

We have no means whereby to ascertain correctly the quantity of coal raised in this country, but there are good grounds for believing that it is at least ten times the quantity that was raised in France in 1841. From Parliamentary documents we know that the quantities shipped coastways from one port to another in Great Britain and Ireland, in 1841, was 7,649,899 tons; the quantity exported to British colonies and foreign countries in the same year was 1,848,294 tons; together, 9,498,193 tons. But we know that for all great manufacturing purposes—smelting, casting, and forging iron and other metals, for glass-making, in the potteries, in our cotton, woollen, flax, and silk factories—coal is used which is produced on the spot, and is therefore not included in any account of shipments. It has been estimated that in our iron-works alone the consumption amounts to 6,877,000 tons yearly; and it will not be thought unreasonable to assume that a like quantity is used in all the other great branches of manufacture which are carried on among the various coal-fields. It was ascertained by a deputation from the body of coal owners of Durham and Northumberland, who were sent through the kingdom for the purpose of making the inquiry in the year 1816, that the quantity of coal distributed by canals and other modes of inland communication from the coal-fields of Yorkshire, Derbyshire, Nottinghamshire, Leicestershire, Warwickshire, and Staffordshire, to the east, west, and south of the kingdom, amounted to 10,808,046 tons; and there can be no doubt that at this time the quantity thus distributed must be much greater. These quantities amount to more than 34,000,000 of tons; and as the number of persons of all ages and both sexes employed in coal-mines in Great Britain in 1841 was found to be 118,233, it follows that the average quantity raised by each person is 253 tons, or about 120 per cent. more than the average quantity raised by each person from the coal-mines in France.

The use of coal in France is not limited to the supply obtained from the mines of that country. Considerable and constantly increasing quantities are yearly imported from Belgium, from the Rhenish provinces of Prussia and Bavaria, and from England. The quantity so imported in 1814 was 165,345 tons; in 1826 it had reached 505,180 tons; in 1836 it had further advanced to 999,452 tons; and in 1841 the quantity imported was 1,619,160 tons. Of this last mentioned quantity the importations were:—

	Tons.
From Belgium	992,226
From the Rhenish provinces of Prussia and Bavaria	196,502
From England, Wales, and Scotland	429,950
From other places	482
	1,619,160

On the other hand, some small quantities of coal are exported from France; but those shipments have never reached 50,000 tons in one year. The quantities of this description of fuel, so important for all manufacturing processes, and so indispensable for some, that remained for use in the kingdom in the years already cited were, in round numbers, as follows:—

	Tons.
In 1814	800,000
In 1826	1,800,000
In 1836	3,517,000
In 1841	4,980,000

The import duties on coal were diminished in 1834 from one uniform rate of 15 francs per ton to 3 francs, 6 francs, and 10 francs per ton, depending upon the district into which it is brought by sea; while the duty on importations by land was reduced from 3 francs to 1 franc and 1 franc 50 cents, such reduction being from 33 to 80 per cent. upon the former rates. The quantities imported have, since this reduction, increased to the extent of 130 per cent.; but, concurrently with this increase, the internal production has been augmented to the extent of 65 per cent.

Iron.

The increase which has taken place in this branch of mining industry since 1836 is not nearly so great as the increase that has attended the production of mineral fuel; for which result we may in great part account by the fact, that the iron trade in France has not been subjected to any diminution of fiscal protection, but continues to be hedged round by high and, as regards many qualities of the metal, prohibitory duties.

There were in 1836 twelve districts in which the making of iron was prosecuted in France. Including both smelting works and works for making bar-iron, there were in those twelve districts 894 distinct establishments. In 1841 the number of distinct establishments was increased to 1023. There were smelting works in 59 different departments, and in 20 other departments the making of pig and bar-iron from ore elsewhere produced was carried on; so that there were only 7 departments throughout France in which one of those two branches of the iron manufacture was not prosecuted. These 7 departments were:—

1. Basses Alpes.
2. Hautes Alpes.
3. Creuse.
4. Gers.
5. Haute Loire.
6. Lozère.
7. Vendée.

In some departments the quantity of iron made was inconsiderable. In Cantal the value of the metal produced was only 1280 francs, or 51*l.* 4*s.*; and in each of 13 other departments the value in the year did not reach 5000*l.* One half in value of all the iron made in France in 1841 was produced in the following 9 departments, which are here placed in the order of their productiveness, viz.:—

1. Haute Marne.
2. Moselle.
3. Côte d'Or.
4. Loire.
5. Nièvre.
6. Ardennes.
7. Cher.
8. Haute Saône.
9. Meuse.

Including with those 9 departments the like number which follow, placed also in the order of their productiveness, viz. :—

1. Seine,	6. Vosges,
2. Doubs,	7. Nord,
3. Gard,	8. Dordogne,
4. Saône et Loire,	9. Indre,
5. Ariège,	

it appears that 5-7ths in value of all the iron made in France is produced in 18 departments, and that the remaining 2-7ths are distributed among 61 departments. The greatest value was in 1841 produced in the department of Haute Marne, and amounted to 11,983,744 francs, or 479,349*l.*, which sum was divided among 86 establishments placed in 41 different localities; some of which establishments are said to have been in operation so early as the beginning of the 17th century.

The value of iron and steel made in the various departments of France, which amounted, according to the returns of the Government inspectors, to 4,975,424*l.* in 1836, is stated by those officers to have amounted in 1841 to 5,671,582*l.*, showing an increase in 5 years of barely 14 per cent. The value assigned to a given weight of the produce has during the same time been reduced at the rate of 8½ per cent.

The 12 districts in which iron is produced are thus distributed according to the official documents:—

	Departments.
1st. Group of the East . .	Haute Saône—Côte d'Or—Doubs—Jura—Vosges—Haut Rhin—Haute Marne—Meurthe.
2nd. Group of the North-west .	Eure—Orne—Mayenne—Morbihan—Sarthe—Loire Inférieure—Côtes du Nord—Eure et Loire—Ille et Vilaine—Manche—Loire et Cher—Marne et Loire—Finisterre.
3rd. Group of the Indre . .	Indre—Vienne—Indre et Loire—Haute Vienne—Deux Sevrès.
4th. Group of Périgord . .	Dordogne—Haute Vienne—Charente—Lot et Garonne—Tarn et Garonne—Corrèze—Lot—Puy de Dôme.
5th. Group of the South-east .	Isère—Vaucluse—Drôme.
6th. Group of the North-east .	Ardennes—Moselle—Meuse—Nord—Bas Rhin—Aisne.
7th. Group of Champagne .	Haute Marne—Côte d'Or—Meuse—Vosges—Yonne—Marne—Aube.
8th. Group of the Centre . .	Nièvre—Saône et Loire—Cher—Allier—Loiret.
9th. Group of the South-west .	Landes—Gironde—Basses Pyrénées—Lot et Garonne.
10th. Group of the Coal Fields of the North	Nord—Pas de Calais—Oise—Seine—Seine et Oise.
11th. Group of the Coal Fields of the South	Loire—Aveyron—Ardêche—Gard—Isère—Rhone.
12th. Group of the Pyrénees and Corsica	Ariège—Pyrénées Orientales—Aude—Haute Garonne—Tarn—Basses Pyrénées—Hautes Pyrénées—Corse.

The grouping in the foregoing arrangement is somewhat different from that adopted in the returns of 1836. The actual and relative importance of each group may be seen from the following figures:—

Group.	Number of Iron Works.	Quantity of Fuel used.				Quantity of Products.		
		Wood Charcoal.	Coke.	Coals.	Wood.	Cast Iron.	Bar Iron.	Steel.
		Tons.	Tons.	Tons.	Stères.	Tons.	Tons.	Tons.
1	159	107,651	59	621	28,742	53,207	27,523	554
2	59	57,063	120	10,559	3,276	28,686	13,011	..
3	28	25,840	1,825	263	..	10,671	5,306	195
4	123	41,411	..	4,487	652	18,053	10,131	81
5	36	6,574	..	7	..	1,819	343	1,592
6	117	88,847	9,706	23,021	141,573	57,697	38,315	348
7	167	126,319	..	47,949	..	88,767	50,043	..
8	119	86,650	18,232	45,250	500	47,344	35,975	957
9	25	19,792	..	240	1,916	10,231	3,637	..
10	24	10	31,014	44,883	..	14,817	20,084	93
11	22	458	114,968	169,895	..	45,850	49,360	936
12	144	33,803	..	2,101	..	..	10,019	2,130
	1,023	594,418	175,924	349,276	176,659	377,142	263,747	6,886

The following figures present the number of workmen employed in the different divisions of the iron manufacture, and the value created in each of those divisions in 1836 and in 1841:—

	1836		1841	
	Number of Workmen.	Value Created.	Number of Workmen.	Value Created.
		£.		£.
1. Extraction and preparation of the Ore	17,557	500,632	15,783	556,211
2. Production of Pig Iron (*fonte*) .	6,776	1,969,132	4,835	1,925,673
3. Production of Malleable Iron (*gros-fer*)	8,678	1,506,247	11,148	1,749,810
4. Drawing, Rolling, &c.	8,615	812.486	13,165	1,208,946
5. Moulting, Casting, &c. Steel . .	2,149	186,927	2,899	230,942
Total	43,775	4,975,424	47,830	5,671,582

The value assigned to each form or product of the manufacture in the French official accounts, is, when converted into English weight and money:—

	Per Ton.		Per Ton.
Pig Iron	£6 11 1	Bolt and Rod Iron . .	£22 18 10
Castings—1st melting	10 14 9	Iron Plates. . . .	24 19 5
Castings—2d melting	16 6 5	Iron Wire	30 1 9
Bar Iron . . .	15 13 1	Cast Steel	55 3 6

These prices, so exorbitantly high when compared with the cost of production in England, must result in great part from the less efficient application of labour in France, and partly also from the higher cost of fuel in that country. Measuring the production of the two countries by the quantity of ore converted into pig iron, it appears that in Great Britain we make 4 tons for each ton made in France, while the number of persons employed for the purpose is positively greater in France than in England, viz.:—

In France . . . 47,830 | In Great Britain . 42,418

Giving as the average quantity of metal resulting from the labour of each person employed rather less than 8 tons in France, and more than 35 tons in this country. But, to estimate to its full extent the greater efficiency of this branch of labour with us, we must bear in mind the greater number of persons employed in France for the production and transport of the fuel used at the iron-works, and which, as we have seen, is 120 per cent. greater than with us. If the cost of fuel at the iron-works of Great Britain were as great as at the iron-works of France, it would on a moderate computation add 50*s.* per ton to the cost of the iron produced in this country.

The value of the fuel consumed in the manufacture of iron in France in 1836 and 1841 was :—

	1836	1841
	£.	£.
Wood Charcoal . . .	1,643,826	1,706,712
Wood	13,040	41,027
Coke	96,972	177,237
Coal	285,235	254,387
Peat	694	301
Total . . .	2,039,767	2,179,664

Being 41 per cent. on the value of metal made in 1836, and 38½ per cent. in 1841.

The above amounts were divided among the different processes in the following proportions :—

	1836	1841
1. Roasting the Ore	0·087	0·104
2. Smelting	55·500	58·717
3. Refining—Puddling Furnaces, &c. . .	36·175	32·721
4. Casting, Drawing, Rolling, &c. . . .	5·959	6·073
5. Moulting, Casting, &c. Steel	2·279	2·385
	100·	100·

The average prices of the different kinds of fuel used in each of the above two years, were :—

	1836	1841
	s. d.	*s. d.*
Wood Charcoal, per ton	54 10	57 5
Coal, per ton	18 5	14 7
Coke, per ton	20 3	20 2
Wood, per stère	2 10	4 7

The continually increasing cost of wood in France, should tend, in conjunction with the continually decreasing cost of coal, to alter the existing system of manufacture; but under any circumstances, the iron-masters in that country must be placed at a disadvantage in competing with countries where ironstone is found on the same spot with the fuel and

the flux needful for its reduction. We have seen that the cost of coal at the places of production in France was in 1836, per ton, 11*s.* 3½*d.*, and in 1841, per ton, 7*s.* 9¼*d.*, and it therefore appears that the expense of carriage from the collieries to the iron-works amounted on the average to 7*s.* 1½*d.* per ton in 1836 and to 6*s.* 9¾*d.* in 1841, or more than the entire cost of the fuel used by English iron-masters.

The quantity of iron made in France in each year from 1837 to 1841 appears from the official documents to have been as follows:—

	Pig Iron.	Malleable Iron.
	Tons.	Tons.
1837	331,679	224,613
1838	347,776	224,195
1839	350,172	231,761
1840	347,773	237,379
1841	377,142	263,747

How inadequate must be the native production of this all important metal, as here shown, to supply the wants of an extensive and populous country like France! If the rules of common sense were allowed to regulate the conduct of nations in matters of this nature, we should assuredly see that every possible inducement were held out to make good the deficiency by importations from foreign countries. The French government has, on the contrary, chosen to throw the most serious obstacle in the way of such importations, and under the pretext of stimulating the production at home, has loaded iron of foreign make with all but prohibitory duties. Pig iron is subject to a rate equal to 3*l.* 2*s.* 6*d.* per ton. Plates, bars, and rods have to pay duties according to their dimensions, varying from 8*l.* 7*s.* 4*d.* to 16*l.* 14*s.* 9*d.* per ton; and such articles as are not actually prohibited, and to which a higher process of manufacture has been applied, for example wire, are charged with a duty equal to 26*l.* 15*s.* 8*d.* per ton. At these rates the importations of iron into France are, as might be expected, small in quantity, not in any one year reaching 50,000 tons. The payment of high duties upon even this small quantity is, however, a proof of the excessive prices which the consumers are forced to pay for all that they use—prices from 100 to 250 per cent. greater than are paid in England; and the slow progress made by the iron-masters of France in providing for the wants of the country should convince the government that the method they have adopted for stimulating production by means of high protective duties, is but ill adapted to that end. It would most probably be found upon inquiry, that the iron-masters in that country are in fact but little interested in the question. By the price which they obtain for their iron they are governed in the price which they can afford to pay for the wood fuel which they use; or it may be more correct to say, that the proprietors of woods in the iron districts exact from the iron-masters the highest price which the market value of their iron will enable them to give, and thus the protecting duty on iron is a benefit only to a proportion of the proprietors of woods, at the expense of the rest of the community.

The small quantity of iron imported from other countries into France is almost wholly in the first stage of manufacture. There are no means

afforded in the official accounts of that country for ascertaining the proportionate quantities of various descriptions of the metal imported; but as the duty levied in 1841 and 1842 upon all kinds of iron averaged 3*l.* 11*s.* 9*d.* per ton, it is evident that nearly the whole importations must have consisted of pig-iron. It is probable that the small importations of other kinds which are made are confined, or nearly so, to the produce of this country, from the greater cheapness of our market; and we know that the great bulk of our shipments to France are of pig-iron. In 1842, out of 23,428 tons of all kinds of iron shipped by us to that country, 16,464 tons were pig-iron; and in 1843 the proportion was still greater, having been 22,103 out of 29,626 tons,—in both cases more than 70 per cent. of the whole shipments.

A considerable relaxation of the French tariff, whereby the purchase of iron from other countries would be encouraged, would doubtless prove of benefit to those of us who are engaged in its production; while the benefit which France must derive in various ways from having so important a material in greater abundance, would, by advancing the general wealth of the country, make France a more desirable customer; but in the meantime, the course which the French government pursues on this and other points of commercial policy, is by no means an unmixed evil to us, through the obstacles which are thereby raised by itself against the manufacturers of that country in their competition with us in third markets.

The production of metals, other than iron, is so inconsiderable as to be a matter of no national importance in France, and it does not at all interest us except as it points out that country as qualified to be a good customer for a portion of our superabundance. The following figures will show that, small as was the production of those metals in 1836, it is now even less.

	1836		1841	
	Quantity.	Value.	Quantity.	Value.
		£.		£.
Lead . . . . Tons.	713	16,209	638	12,559
Silver . . . . Ozs.	81,152	16,650	73,680	18,340
Antimony . . . Tons.	411	12,121	112	6,198
Copper . . . . ,,	102	7,877	100	11,147
Manganese . . ,,	1,667	6,106	1,978	5,899

These quantities are of course quite inadequate for the supply of the kingdom, and the importations for consumption (*commerce spécial*) into France in 1841 and 1842 were as follows:—

	1841	1842
Lead . . . Tons.	17,375	18,671
Copper . . . ,,	9,770	10,814
Manganese . . ,,	1,341	1,295

The greater part of the lead was obtained from Spain, but England supplied of that metal 2,519 tons in 1841 and 5,027 tons in 1842. The copper was principally imported from England, viz., 6,830 tons in 1841 and 8,300 tons in 1842, a great part being the produce of foreign ore smelted in England.

The declared value of British metals and of coals exported to France in 1842 was as follows:—

Iron and Steel	£105,172
Hardwares and Cutlery	90,035
Copper	682,833
Lead	91,687
Tin	79,223
	1,048,950
Coals	173,278
	1,222,228

The quantities of iron and steel exported in that year and in 1843 to France were:—

	1842				1843			
	Tons.	cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.
Bars	4,566	1	3	26	4,237	9	2	3
Bolt and Rod	174	17	..	..	295	2	2	..
Pigs	16,464	..	..	..	22,103	..	..	..
Cast	52	16	..	9	324	..	3	14
Wire	39	..	1	8	39	..	..	22
Anchors, &c.	289	8	..	4	444	17	..	23
Hoops	506	14	2	..	443	11	1	16
Nails	1	1	3	7	3	11	1	16
Other kinds	834	13	2	9	1,153	7	2	3
Old for re-manufacture	172	..	..	..	341	..	..	..
Steel	327	7	1	9	241	..	2	25
	23,428	0	2	16	29,626	1	1	10

Note.—Since the foregoing statement was drawn up, the "*Résumé des Travaux Statistiques de l'Administration des Mines en* 1843," detailing the mining operations carried on in France in 1842, has been received. From this statement it appears, that the production of coal, lignite and anthracite, amounted in that year to 3,592,084 tons, being an increase over the preceding year of 181,884 tons, or $5\frac{1}{3}$ per cent. The excess of the quantity imported over that exported, which in 1841 was 1,569,692 tons, amounted in 1842 to 1,611,331 tons, leaving from this source an increase for internal use of 41,639 tons, and showing the total increase of consumption to have been $4\frac{1}{2}$ per cent. over the year 1841. The production of pig iron in 1842 exceeded that of 1841 by 22,314 tons, or not quite 6 per cent. Of bar iron the increase was 21,076 tons, or 8 per cent., and the value was also increased by 256,731*l.*

Report on the Experience of the St. Marylebone Infirmary, since 1827, with respect to Admissions, Duration of Treatment, Mortality, and other Statistical Results, according to Age and Sex. By John Clendinning, M.D. Oxon., F.R.S., Physician to the Infirmary.

[*Read before the Statistical Section of the British Association at York, October 1st, 1844.*]

In 1838 a Committee was appointed by the Council of the Statistical Society for "collecting the statistics of life," as shown more especially in the leading medical charities of the country, and circulars were issued to 46 London institutions, and to about 80 similar charities in the provinces; amongst the former was the parochial infirmary of St. Marylebone. In consequence of this application conveyed to the guardians and directors of the poor for St. Marylebone, by the author of this paper, permission was given him by the guardians to examine the records of the infirmary, and report the results of his inquiry to the Committee. Circumstances beyond the control of the writer, prevented the preparation of a report of the experience of the infirmary, in due time for the use of the Committee. Since then the writer has been enabled to complete those analyses for which suitable materials were then placed at his disposal. He has, further, since been able to make use of returns made to the Poor Law Commissioners, and to the guardians, for various purposes, and at various times, all of which have more or less bearing on the subject of the statistics of life. Some time since, the author communicated to some leading members of the statistical section of "The British Association for the Advancement of Science," the fact that he was in possession of these materials; and undertook, with their sanction, to draw up a report to be presented to the ensuing meeting of the Association, if his other engagements should admit of his completing it in time, and if not at the next meeting, then at the meeting of the following year. He has subsequently had communication again with the members of the statistical section above alluded to, and with the treasurer of the Association, and has the honour now, with the sanction of those gentlemen, to present his report in as complete a condition as the materials at his disposal have admitted of.

Preliminary General Observations respecting the Infirmary.

The St. Marylebone Infirmary, or "Sick House," forms a portion of the parochial establishment for the relief of the poor of St. Marylebone. It adjoins, but is distinct from, the "Workhouse," having for the most part officers and servants of its own. Its professional staff consists of 3 honorary Physicians—an honorary Physician Accoucheur—2 honorary Surgeons—a House Surgeon—3 assistant House Surgeons—and 2 Dispensers—in all 12 persons. The admissions to its wards come partly from out of doors, and partly from the adjoining workhouse. It receives indifferently both sexes, all ages, and all diseases, except small-pox. The right of admission is legally limited to persons locally resident for a minimum time; but in practice the legal limit as to residence, is often, as I understand, over-stepped in favour of urgent sickness, and extreme destitution; and such transgressions of law, are happily now not only justifiable but inevitable, in consequence of the

recent advances in the mind of the more intelligent classes, towards a healthy state of opinion and feeling with regard to the poor.

As admission into this "Sick House" or Infirmary is, morally at least, a right of the locally resident sick poor of a very large and populous parish; the number of its inmates is subject to all the influences of season, weather, epidemic constitution, commercial activity, and other sources of fluctuation; so that most years the sick population has varied from 150 or 160 in the fine season (about June usually) to 300 or 320, 330, and upwards; the extreme in this direction happening usually in January. These numbers are exclusive of the much larger number of chronic or slight cases prescribed for in the forenoon, whether coming from the workhouse or their own homes, at the Infirmary, by the resident medical officers.

In common with other metropolitan asylums of sickness, general as well as parochial, the registers of the Infirmary were formerly kept in an old-fashioned and very imperfect manner, and were ill adapted to forward many of the objects of the medical statist. Since 1840, however, a better system has been in operation. At the suggestion of the writer, a form of registration has been adopted, substantially in accordance with the views of the London Statistical Society, and coinciding in most points with that recommended by the Committee on Hospital Statistics: so that hereafter the records of the Infirmary may be expected to furnish very valuable materials for numerical investigation of the laws of disease, more especially regarding the disorders of infancy and early childhood, and of extreme age, which are all comparatively little known in the wards of the general hospitals; also regarding the duration of several classes of incurable disease, organic or functional only, which are commonly either not admitted, or discharged after a short stay, and respecting which it is of the greatest importance, with a view to the extension of the practice of life assurance to its legitimate limits, that accurate statistical information should be obtained.

Materials for this Report.

The facts that collectively form the subject matter of this report, are contained in 11 chief tables, exclusive of subordinate tabulations illustrative of those 11 principal.

1. The first table presents a general view of the experience of the infirmary, as to annual admissions and deaths, with their ratios, in 17 years, commencing with July 1827, ending with June 1844, without distinction of sex, age, &c.

2. The second table gives the admissions of $8\frac{3}{4}$ years, ending with March 1836, and distinguishing sexes and ages, but not years.

3. Table III. presents similar facts, similarly analysed and arranged, for $4\frac{1}{4}$ years, ending with June 1840.

4. Table IV. gives the duration of treatment for $8\frac{3}{4}$ years, ending March 1836, and stated in weeks and lunar months, with distinction of sex only.

5. Table V. gives the like facts in like order for $4\frac{1}{4}$ years, ending June 1840.

6. and 7. Table VI. gives the average stay in the sick-house, according to sex and age, for the period 1827—1836; and Table VII. gives the like results for the subsequent period, 1836—1840.

8 and 9. Tables VIII. and IX. refer solely to the mortality, which is presented in two different aspects in each table, and for two different series of years, viz., 1827—1836, and 1836—40. A mortality is presented, 1. in its relation to the admissions of each sex at *each* age; and 2. to the whole mortality of each sex at *all* ages.

10. Table X. shows the distribution of the admissions and deaths over the months and seasons of $11\frac{2}{3}$ years ending in 1839.

11. Table XI. gives the admissions for $6\frac{3}{4}$ years ending in March 1844, distinguishing whether from W. H. (workhouse), or O. D. (out of doors); and whether under the physicians or surgeons.—The discharges, whether—1. cured,—2. relieved or incurable,—3. by desire uncured,—4. irregular,—5. to a lunatic asylum,—6. from the lying-in ward. —The deaths for the same period, whether under physicians or surgeons, each quarter. It gives, further, the average stay in the wards, whether of physicians or surgeons; also the gross quarterly amounts of out-patients prescribed for in the morning by the resident officers.

I regret that the shape in which the official records of the infirmary have been kept until very lately, has not admitted of any satisfactory analysis, including distinction of disease, or of trade or occupation.

Mr. Farr suggested to me that a table of mortality, in which the deaths should be classified according to duration of sickness, might be of much interest, and for benefit societies, and other assurance associations, might be of considerable value. I have to regret my inability to carry out the recommendation of so high an authority on this occasion.

TABLE I.—*Admissions and Deaths in each Year from* 1827 (*June* 31*st*) *to* 1844 (*July* 1*st*); *in all* 17 *Years.*

Years.	Admissions.	Deaths.	Ratios per Cent.
1827 (last 6 months)	1554	99	6·33
1828	2989	221	7·4
1829	2837	246	8·67
1830	2707	249	9·2
1831	3131	292	9·33
1832	2437	237	9·7
1833	2605	308	11·0
1834	2620	259	9·9
1835	2154	288	18·33 nearly.
1836	2358	358	15·25 ,,
1837	2480	444	18·0 ,,
1838	2569	360*	13·66
1839	2713	322	11·8
1840	2789	319	11·4
1841	3143	382*	12·15
1842	2353	335	14·3
1843	2978	377	13·0
1844 (6 months)	1615	171	10·6

* The mortality of each of those years (1838 and 1841) has been erroneously given by the registrar of the district. (See Report for 1843, page 500.) I have ascertained the fact by personal inquiries.—J. C.

From this table it appears that the admissions of those 17 years (*i.e.* 16 complete years, 1828—1843, and two half years), amounted col-

lectively to about 46,000, (46,028), and that they varied from 2154 (in 1835), which was the minimum received in any one year of the period, to 3143 (in 1841), which was the maximum of annual admissions. The extreme limit of fluctuation as to receptions, seems to have amounted to about 1000 persons. The annual average of admissions, was about 2700 (2707½).

From the same table, it appears that the deaths for the 17 years ending with June 1844, were 5367; that the annual deaths on an average were 315⅔; and that the proportion borne by the deaths in the aggregate to the admissions collectively, was 11·6 per cent.

Of late years the mortality appears to have risen very considerably, viz., from less than 7 per cent. in 1827, on the admissions, to 18·33 on the admissions of 1835, since which the mortality has not been lower in any year than 11·4 per cent., while on the 8 years, 1836—1843, the mortality has averaged 14·2 annually.

If we divide the 16 complete years (1828—1843) into two series of eight years each, ending with 1835 and 1843 respectively, we shall have for the former series (1827—1835) an—

Annual average of admissions		2,685
,, deaths		262·5
Lowest mortality on admissions (1828)	per cent.	7·4
Highest ,, ,, (1835)	,,	18·33
Average ,, ,,	,,	9·7

Whereas, for the latter series (1836-1843), we shall have the following, viz.—

Average annual admissions		2,674
,, deaths		362·12
Lowest mortality on admissions (1840)	per cent.	11·4
Highest mortality ,, (1837)	,,	18·0
Average mortality annually	,,	13·50
Difference (numerically) in favour of the latter series, nearly	,,	30·0

The causes of the increased mortality of late years are of course various: one of them is suggested by this table;—the domestic accommodations in the workhouse have, it may be presumed, sensibly fallen short of late years, relatively to the pauper parochial population, causing a more vigilant scrutiny of claims and sedulous sifting of cases, and a generally diminished facility of admission for less urgent sickness.

I perceive by the last Report of the Census Commissioners, and the Report of the Registrar-General for 1843, that Marylebone must have increased some 14 or 15 per cent., in the period 1831—1844. I perceive also that the expenditure on account of the parochial poor has risen much of late. It was, for example, according to the Registrar-General, 26,438*l.* in 1839, 29,917*l.* in 1840, 35,517*l.* in 1841, and 41,476*l.* in 1842; being near 40 per cent. increase in 4 years; yet the admissions of the former 8 years (1828—1835) exceeded those of the latter series (1836—1843) by 97. It is probably in accordance with the view above suggested, that we find the smaller number of receptions of the second series yield, nevertheless, nearly 800 (797) more deaths. But other causes have concurrently contributed to the increase of mortality, especially grievous commercial fluctuations and depression, and an epidemic constitution, to which we owe the frightful rather than destructive spasmodic cholera, the far more mischievous influenza of various

years since 1831, and the low spotted fevers and generally adynamic and unfavourable character of disease of the same period. But on these topics I am not probably an unexceptionable commentator, having been myself on the professional staff of the parish, as physician to the parochial sick-house or infirmary since some time in 1834; nor do I in fact feel myself sufficiently at liberty to discuss satisfactorily the causes of the increased mortality exhibited above. I shall content myself with affirming that it has *not* arisen from any paucity of qualified medical officers, or any deficiency in the sick-house of any means or appliances, whether medicinal or dietetic, usually resorted to, or that have been judged necessary by the physicians or surgeons in the service of the guardians.

TABLE II.—*Admissions for* 8¾ *Years, ending with March* 1836, *according to Sex and Age.*

Age.	Males.		Females.	
	Number.	Ratio.	Number.	Ratio.
Under 5 years	452	3·82	475	4·37
5 to 10 ,,	1,547	13·09	1 452	13·37
10 — 15 ,,	2,026	17·09	1,129	10·39
15 — 20 ,,	1,042	8·81	1,099	10·12
20 — 30 ,,	1,753	7·41	2,015	9·27
30 — 40 ,,	1,418	6·	1,315	6·5
40 — 50 ,,	1,151	4·86	1,045	4·81
50 — 60 ,,	1,065	4·5	8 3	3·97
60 — 70 ,,	881	3·72	860	3·93
70 — 80 ,,	387	..	479	..
80 — 90 ,,	96 } 486	0·83 } 4·55	610 { 118 }	5·05 { 1·12
90 —100 ,,	3	..	13	..
Totals . . .	11,821	100	10,863	100
Under 15 ,,	4,023	34·5	3,056	28·1

TABLE III.—*Admissions for* 4½ *Years, ending with June* 1840; *distinguishing in like manner Ages and Sexes.*

Age.	Males.		Age.	Females.	
	Number	Per Cent.		Number.	Per Cent.
Under 1 year	126	2 5 } 8·3	Under 1 year	104	1·8
1 to 5 years	287	43·8 { 5·8	1 to 5 years	274 } 2068	6·6 { 4·8 } 36·7
5 — 10 ,,	860	17·5 nearly	5 — 10 ,,	1,040	18·4
10 — 15 ,,	890	18· ,,	10 — 15 ,,	650	11·7
15 — 20 ,,	262	5·3	15 — 20 ,,	348	6·5
20 — 30 ,,	443	9·	20 — 30 ,,	764	13·4
30 — 40 ,,	531	10·8	30 — 40 ,,	634	11·4
40 — 50 ,,	438	8·8	40 — 50 ,,	520	9·2
50 — 60 ,,	450	9·2	50 — 60 ,,	450	8·
60 — 70 ,,	413	8·4	60 — 70 ,,	486	8·6
70 — 80 ,,	189	3·8 } 16·3	70 — 80 ,,	255	4·5
80 — 90 ,,	22 } 212	4·1	80 — 90 ,,	58 } 310	14·1 { 1·03 } 5·5
90 —100 ,,	1		90 —100 ,,	7	0·12
	4,912	..	..	5,590	100·00

The results given in these two tables, have been obtained at different times; and it is partly for this reason, that I now present them separately.

From the former table (No. II.) it appears that of 11,821 males admitted, 4,023, or 34·5 per cent., were under 15 years of age, and 487, or between 4 and 5 per cent. were above 60 years of age, the rest having been distributed in a regularly decreasing rate amongst the ages between 15 and 60. It appears, likewise, that of 10,863 females admitted at all ages, 3056, or 28·1 per cent., were under 15, and 660, or nearly 6 per cent., above 60; the intervening ages receiving their shares of the admissions in a gradually decreasing proportion, from 15 to 60. From the latter table (No. III.) it appears that of 4912 male admissions, 2163, or 43·8 per cent. were under 15, while 625 or 12·5 per cent. were over 60; and on the female side, of 5590 admissions, 2068, or 36·7 per cent., were under 15, and 796, or 14·1, above 60; so that in the former period, about 17·0 per cent. males, and 18·0 per cent. females, of the admissions at all ages, were under 10 years of age; while in the second period we have 25·8 per cent. males, and 25·0 per cent. females, under 10 years of age. And above 60 we have a similar numerical preponderance in favour of the second period, viz., 12·5 of the males at all ages above 60, and 14·1 of the females. This difference between the two periods, if not accidental, gives countenance to the supposition above alluded to, of increased stringency of poor law administration of late years.

TABLE IV.—*Duration of Treatment in Weeks or Months, with distinction of Sex, 1827 to 1836.*

Duration of Treatment.	Females.				Males.			
	Number.		Per Cent.		Number.		Per Cent.	
Under 1 week	2,404		22·13		3.134		26·50	
1 to 2 weeks	2,154		19·83		2,649		22·40	
2 — 3 ,,	1,556		14·32		1,612		13·64	
3 — 4 ,,	1,114		10·25		1,143		9·67	
4 — 5 ,,	820		7·54		777		6·57	
5 — 6 ,,	553		5·09		539		4·56	
6 — 7 ,,	408		3·75		376		3·18	
7 — 8 ,,	299		2·75		300		2·54	
8 —12 ,,	719		6·62		622		5·26	
3 — 4 months	343		3·16		275		2·33	
4 — 5 ,,	167	612	1·54	5·64	154	517	1·30	4·38
5 — 6 ,,	102		·94		88		·75	
6 — 7 ,,	55		·51		47		·40	
7 — 8 ,,	47		·43		30		·26	
8 — 9 ,,	27		·25		13		·11	
9 —10 ,,	15	162	·14	1·50	19	129	·16	1·1
10 —11 ,,	14		·13		13		·11	
11 —12 ,,	4		·4		7		·6	
12 —13 and over	62		·58		23		·20	
	10,863		100·00		11,821		100·00	

From this table it appears that in the period 1827—1836, about 26·5 males, and 22·13 females were discharged or died in the first week after admission; that 72 per cent. males, and 66·5 females were

discharged, or died, within the first lunar or calendar month after admission; and that of the males 94, and of the females 92 per cent. were discharged or died within three lunar months after their admission.

TABLE V.—*Duration of Treatment in Weeks, with distinction of Sex,* 1836 *to* 1840.

Duration of Treatment.	Males.		Duration of Treatment.	Females.	
	Number.	Per Cent.		Number.	Per Cent.
Under 1 week	1,173	23·9	Under 1 week	1,014	18·13
1 to 2 weeks	976	19·8	1 to 2 weeks	1,129	20·2
2 — 3 ,,	673	13·7	2 — 3 ,,	884	15·8
3 — 4 ,,	542	11·3	3 — 4 ,,	604	12·2
4 — 5 ,,	421	8·6	4 — 5 ,,	444	8·
5 — 6 ,,	225	4·6	5 — 6 ,,	310	5·5
6 — 7 ,,	181	3·68	6 — 7 ,,	228	4·
7 — 8 ,,	130	2·64	7 — 8 ,,	178	3·18
8 —12 ,,	323	6·57	8 —12 ,,	401	7·17
12 —24 ,,	205	4·2	12 —24 ,,	318	5·6
24 and over .	60	1·2	24 and over .	77	1·3
Over 52 weeks	3	0·06	Over 52 weeks	3	0·05
	4,912	100·00	..	5,590	100·00

TABLE VI.—*Duration of Treatment, according to Age and Sex,* 1827 *to* 1836.

Age.	Males.				Females.			
	Number of Cases.		Average Duration.		Number of Cases.		Average Duration.	
Under 5 years	3,134		30 days		2,404		35 days	
5 to 10 ,,	2,649		21		2,154		23	
10 — 15 ,,	1,612		17		1,556		24	
15 — 20 ,,	1,143		19		1,114		30	
20 — 25 ,,	777	1,316	26	27·	820	1,373	33	32·5
25 — 30 ,,	539		28		553		32	
30 — 35 ,,	376	676	31	32·5	408	707	36	36·
35 — 40 ,,	300		34		299		36	
40 — 45 ,,	622	897	32	33·	719	1,062	31	32·5
45 — 50 ,,	275		34		343		34	
50 — 55 ,,	154	242	33	33·	167	269	39	39·
55 — 60 ,,	88		33		102		39	
60 — 65 ,,	47	77	37	37·	55	102	38	38·5
65 — 70 ,,	30		37		47		39	
70 — 75 ,,	13	32	34	32·	27	42	38	36·
75 — 80 ,,	19		30		15		34	
80 — 85 ,,	13		20		14		38	
85 — 90 ,,	7	43	15	35·6	4	80	23	39·5
90 — 100 ,,	23		42		62		58	
General Totals and Averages . .	11,821		27·90		10,863		32·4	

TABLE VII.—*Duration of Treatment in Days, according to Age and Sex,* 1836 *to* 1840.

Age.	Males.			Females.		
	Number.	Total Days.	Average Duration in Days.	Number.	Total Days.	Average Duration in Days.
Under 1 year	126	3,716	29·5	104	3,543	34·
1 to 5 years	287	10,703	37·	274	9,228	33·5
Total under 5 years . .	413	..	33·2	378	..	33·7
5 to 10 years	860	23,409	27·2	1,040	28,646	27·4
10 — 15 ,,	890	19,381	21·7	650	13,520	20·7
15 — 20 ,,	262	6,693	21·3	348	10,692	28·8
20 — 30 ,,	443	13,276	30·	764	25,270	33·
30 — 40 ,,	531	16,978	32·	634	22,200	35·
40 — 50 ,,	438	12,513	28·8	520	19,533	37·5
50 — 60 ,,	450	14,239	31·3	450	17,047	37·7
60 — 70 ,,	413	12,876	31·	486	16,041	33·
70 — 80 ,,	189	4,654	24·6	255	8,853	34·5
80 — 90 ,, 90 —100 ,,	23	551	23·25	65	2,154	33. 32·4
Totals . .	4,912	138,989	..	5,590	176,727	..

From Table V. it appears that of the patients admitted in the second period, 23 per cent. males, and 18·13 females, were discharged or died within the first week of treatment; that 68·7 males, and 67·5 females, were discharged or died in the first lunar month after admission; and that of the males 93 per cent., and of the females 98·5, were discharged by cure, or otherwise, within three lunar months after admission.

Tables VI. and VII. give the duration of treatment in another shape, and from a different point of view. In these tables the admissions for the two series of years are classified according to age and sex, and average stay in the house. From the former table (No. VI.), it appears that the shortest stay made by any class of males was 17 days, which was the time of residence of those between 10 and 15 years of age; on the female side the shortest stay was that of the class 5 to 10, viz., 23 days. In each sex the longest stay made by any of the first four quinquennial periods was by the class 0 — 5 years of age, viz., 30 days for the males and 35 days for the females, whereas the other quinquennial periods were thus, viz.:—

Age.	Males.	Females.
	Days.	Days.
5 to 10 years	21	23
10 — 15 ,,	17	24
15 — 20 ,,	19	30

The following gives the contrasted results for the rest of life:—

Age.	Males.	Females.
	Days.	Days.
20 to 30 years	27·	32·5
30 — 40 ,,	32·5	36·
40 — 50 ,,	33·	32·5
50 — 60 ,,	33·	39·
60 —100 ,,	34·9	42·9

In every class, with one exception (viz., class 40 — 50 years of age), the female average stay was from $3\frac{1}{2}$ to 8 days in excess as compared with that of the male corresponding classes.

From the 7th table a nearly similar excess on the females in duration of treatment or stay in the wards is observable, being, however, conspicuous principally in the ages after 15. From this table it appears that the 0 — 5 years of age in each sex was between 33 and 34 days in the house (viz., males 33·2, and females 33·7 days); that between 5 and 10 the stay of the sexes was equal (viz., males 27·2, and females 27·4 days); that the classes 10 — 15 differed little (viz. males 21·7, and females 20·7 days); but that of the classes 15 — 20, the females staid a week longer than the males (viz., 28·8 and 21·3 days); and after 20 years of age there is an excess at every age on the side of the females, varying from 1 to 10 days. Above 60 the case stands thus, viz., 60 — 100, males 26·3 days, females 33·5 days. The excess of adult females in these two tables is referable, I presume, mainly to the relatively high value of male labour and low value of female; to the comparative impatience of official authority and hospital discipline of the males; and to the preponderance of widows above widowers amongst the population.

TABLE VIII.—*Mortality on the Admissions at each Age, and on the Mortality at all Ages*—1827 *to* 1836.

Age.	Males.			Females.		
	Deaths.	Deaths to Admissions.	Deaths to whole Deaths.	Deaths.	Deaths to Admissions.	Deaths to whole Deaths.
		Per Cent.	Per Cent.		Per Cent.	Per Cent.
Under 5 years	64	14·15	5·57	87	18·31	7·52
5 to 10 ,,	23	1·48	2·8	28	1·92	2·42
10 — 15 ,,	26	1·28	2·26	26	2·2	2·25
15 — 20 ,,	24	2·30	2·09	37	3·36	3·20
20 — 25 ,,	34 } 141	8·04	12·28	37 } 159	7·89	13·74
25 — 30 ,,	107			122		
30 — 40 ,,	168	11·84	14·63	151	11·48	13·05
40 — 50 ,,	167	14·50	14·54	146	13·97	12·62
50 — 60 ,,	187	17·55	16·28	170	19·69	14·69
60 — 70 ,,	194	22·02	16·89	183	21·27	15·82
70 — 80 ,,	120	31·	10·45	137	28·6	11·84
80 — 90 ,, 90 and upwards	34	31·7	2·96	33	25·19	2·85
General totals and averages	1,148	9·71	100·00	1,157	10·65	100·00
60 — 100 years	..	29·3	10·10	..	25·	9·90

TABLE IX.—*Mortality on the Admissions at each Age, and on the Mortality at all Ages*—1836 *to* 1840.

Age.	Males.			Females.		
	Deaths.	Deaths to Admissions.	Deaths to whole Deaths.	Deaths.	Deaths to Admissions.	Deaths to whole Deaths.
		Per Cent.	Per Cent.		Per Cent.	Per Cent.
Under 1 year	26	20·6 } 7·6	3·8	18	17·3 } 8·7	3·
1 to 5 years	26	9·05	3·8	34	12·4	5·7
5 — 10 ,,	12	1·3	1·8	24	2·29	4·
10 — 15 ,,	13	1·46	1·8	8	1·22	1·3
15 — 20 ,,	18	6·87	2·6	13	3·7	2·
20 — 30 ,,	63	14·2	9·4	68	8·86	11·4
30 — 40 ,,	123	20·1	18·3	72	11·3	12·
40 — 50 ,,	101	23·	15·	76	14·61	12·
50 — 60 ,,	98	21·5	14·	83	18·4	14·
60 — 70 ,,	110	26·5	16·3	100	22·7	16·8
70 — 80 ,,	69	36·5	10·4	70	27·4	11·8
80 — 90 ,,	11	50·	1·7	25	43·	4·2
90 —100 ,,	1	100·	0·015	3	42·9	0·05
Totals . .	671		100·	594		100·
0 — 5 years	52	12·5	7·7	52	13·7	8·
60 —100 ,,	191	37·6	9·5	198	45·3	10·9

TABLE IX. *a.*—*Mortality according to Age of both Sexes. Comparative View of the Results of the 8th and 9th Tables.*

Ages.	Mortality on Admissions.		
	First Observation.	Last Observation.	Differences.
Under 5 years .	16·26	14·85	− 9·0 per cent.
,, 10 ,, .	1·70	1·84	+ 8 ,,
,, 15 ,, .	1·79	1·34	− 25 ,,
,, 20 ,, .	2·83	5·20	+ 50 per cent nearly.
,, 30 ,, .	7·95	11·52	+ 30 per cent.
,, 40 ,, .	11·66	17·24	+ 32 ,,
,, 50 ,, .	14·23	18·96	+ 25 ,,
,, 60 ,, .	18·62	19·88	+ 6 ,,
,, 70 ,, .	21·64	23·53	+ 16 ,,
,, 80 ,, .	29·80	29·33	
Above 80 ,, .	29·94	48·27	
Mortalities above 60 of the two Series of Years	=27·12	=33·70	

In the former table we observe for the class 0 — 5 of each sex a mortality very heavy and not equalled in the subsequent ages under 45 to 55; that of the males 0 — 5, was 14·15 on the admissions and 5·57 on the mortality at all ages; while the mortality of the females was still heavier, having been (females 0 — 5) 18·31 on the admissions and 7·52 on the whole female mortality; while the highest mortality under 50 for either sex was (males 40 — 50) 14·5 per cent. on the admissions. Over 60 the mortality on the admissions was—males 29·3, females 25·; and to the whole mortality at all ages it was, males 10·1, females 9·9.

At the ages intervening between 5 and 60, there was a tolerably close approximation between the sexes in most instances; the largest difference being 4·3 per cent. and in the class above 60. In both sexes the mortality on the admissions was much lowest at the quinquennial ages, viz., from 5 to 20, being as under:—

Age.	Males.	Females.
	Per Cent.	Per Cent.
5 to 10 years	1·48	1·92
10 — 15 ,,	1·28	2·2
15 — 20 ,,	2·30	3·36

After 20 the mortality on the admissions increases steadily with either sex from about 8 per cent. at 30, to above 25 per cent. at above 60. In Table IX. (the latter of those under present consideration) we perceive that the mortality on the admissions under 1 year of age was 20·6 males, and 17·3 females per cent., while the mortality from 0 — 5 was—males 12·5, females 13·7. In either sex the proportion of the whole mortality falling in between 0 (or birth) and 5, was about 8 per cent. After 5 the mortality of either sex falls to near the minimum, being lowest of all at 10 — 15, viz., 1·46 for the males and 1·22 for the females. After 15 it rises rapidly to the maximum, which, of course, occurs after 60, viz., males 37·6, females 45·3 per cent.; the male deaths over 60, being 9·5, and the female deaths 10·9, of the whole mortality of each sex.

In a subordinate table (IX. *a*) I have thrown together the results of Tables VIII. and IX., with a view to show the increase of mortality of late years, and the mode of its distribution over the ages. From this it appears that the augmented pressure has been borne principally by the adults. At every age, except 0 — 5 and 10 — 15, there is a considerable balance against the ages after 15, and this amounts in different instances to 6 per cent. (50 — 60), 8 per cent. (5 — 10), 16 per cent. (above 60), 25 per cent. (40 — 50), 30 per cent. (20 — 30), 32 per cent. (30 — 40), and even to 50 per cent. (15 — 20). These tables seem to show that of late years some diminution must have occurred in the facilities of procuring admission into the sick-house for slighter cases and less urgent stages and forms of disease, or else that the causes of disease and death, after 15, have latterly attained enormous force in some way that I am unable to see. There has been in the whole period of observation no important change in the hands, resources, or domestic management of the sick-house, with the exception of improvements in economical and other details.

From the following table, which, though not covering the whole of the second series of years, may still be regarded as fairly exemplifying the experience of the Infirmary with respect to season and its effects, it appears that the month of largest admissions was January, which averaged (on 12th January) 264, while the month of least admissions was September, which averaged 194 on 12th September. Next to January came March, with 250·5 admissions; then October, with 229; then December, with 226; then November (220); then August (218); then April (217); and then February (without correction = 214). After September the lowest were—June (197); then May (204·5); then July (210).

TABLE X.—*Average Admissions, Deaths, and Mortality, in the Months and Quarters, of Eleven Years and two-thirds, ending in* 1839.

Months.	Averages of		Ratio of Admissions to Deaths.	Number of Months.	Mortality per Quarter on Admission.	Order according to	
	Admissions.	Deaths.				Admissions.	Deaths.
January .	264	37	:: 7·1 : 1 =14 per cent.	12 Jan.	1st Quarter =12 per cent.	1	1
February .	214	29	:: 7·3 : 1 =13·5 per cent.	12 Feb.		8	2
March .	250½	24	:: 10·5 : 1 =9·5 per cent.	11 Mar.		2	9
April . .	217	26¾	:: 8·1 : 1 =12·2 per cent.	11 Apr.	2nd Quarter =11·3 per cent.	9	3
May . .	204½	23·1	:: 8·8 : 1 =11·3 per cent.	11 May		7	5
June . .	197	20½	:: 9·6 : 1 =10·3 per cent.	11 June		11	6
July . .	210	21	:: 10 : 1 =10 per cent.	12 July	3rd Quarter =9·6 per cent.	10	7
August .	218	20⅔	:: 10·5 : 1 =9·5 per cent.	12 Aug.		6	9
September	194	22¾	:: 10·5 : 1 =9·5 per cent.	12 Sept.		12	9
October .	229	22¼	:: 10·07 : 1 =10 per cent.	12 Oct.	4th Quarter =10·6 per cent.	3	8
November	220	27¼	:: 9·9 : 1 =10·1 per cent.	12 Nov.		5	7
December	226	18¼	:: 8·3 : 1 =12 per cent.	12 Dec.		4	4

Taking the months in the usual groups or seasons, and allowing for the inequality in the number of the months (column 5), we have the following average of admissions, viz. :—

1st Quarter, January to March . 728·5 per cent.
2nd Quarter, April to June . . 618·5 ,,
3rd Quarter, July to September . 622 ,,
4th Quarter, October to December 675 ,,

According to these figures, there was an excess in the admissions for the first quarter of the year, and without any correction on account of February, over each of the middle quarters, of 14 to 15 per cent., and an excess for the last quarter over each of the two preceding quarters of about 7 per cent. When we direct attention to the mortality of the months, we find the results different, in some cases widely, from that of the admissions. As to deaths January stands again at the head, viz., 1 in 7·1, or nearly 14 per cent. on the admissions. Next comes February (which taken at 28 days was but the 8th in the order of admissions), with a mortality of 1 in 7·3, or 13·5 per cent.; then follows April, with 1 death to 8·1 admissions, or 12·2 per cent. Next to April was December, with deaths 1 to 8·3 admissions, or about 12 per cent. No other month gave more than 10 per cent. mortality, except May, which gave 11 per cent. Now taking the mortality in quarters, we obtain the following results, viz. :—

1st Quarter, January to March . 12 per cent.
2nd Quarter, April to June . . 11·3 ,,
3rd Quarter, July to September . 9·6 ,,
4th Quarter, October to December 10·6 ,,

TABLE XI. *Abstracted from Returns made Quarterly to the Board of Guardians Quarterly Admissions, whence, and to what Wards; the Discharges, whether Cured Number in the Wards, Medical and Surgical; the Average Stay in the Wards,*

	Admissions.			Discharges.					Lying-in Ward.	Total Out Patients.	Sent to a Lunatic Asylum.
	From W. H.	From O. D.	Total.	Cured.	Incurable, or Relieved.	By Desire, Uncured.	Irregular.	Total.			
1837											
Oct. 1 to Dec. 31.	351	242	593	363	93	12	2	470	21	1,161	4
1838											
Quarter to 31 Mar.	438	221	659	411	97	20	2	530	25	1,347	..
,, 30 June	381	226	607	435	140	25	..	600	20	1,125	6
,, 30 Sept.	386	224	610	395	138	19	1	553	16	1,096	9
,, 31 Dec.	434	258	692	344	122	30	..	496	22	1,161	3
Totals .	1,639	929	2,568	1,585	497	84	3	2,179	83	4,729	18
1839											
Quarter to 31 Mar.	465	177	642	396	82	22	2	502	29	1,084	4
,, 30 June	416	198	614	493	87	29	1	610	30	1,133	3
,, 30 Sept.	547	196	743	570	82	24	2	678	24	1,205	..
,, 31 Dec.	481	233	714	532	73	17	..	622	32	1,548	4
Totals .	1,909	804	2,713	1,991	324	92	5	2,412	115	4,970	11
1840											
Quarter to 31 Mar.	507	248	755	535	91	8	1	635	37	1,622	5
,, 30 June	388	227	615	502	118	11	..	631	27	1,537	3
,, 30 Sept.	422	233	657	516	121	10	..	647	37	1,961	7
,, 31 Dec.	423	339	762	597	148	11	1	757	44	2,316	1
Totals .	1,740	1,047	2,789	2,150	478	40	2	2,670	145	7,436	16
1841											
Quarter to 31 Mar.	555	442	997	667	154	14	2	837	53	2,769	11
,, 30 June	378	268	946	411	97	11	..	509	40	1,832	10
,, 30 Sept.	318	228	546	446	82	7	2	537	38	2,386	11
,, 31 Dec.	458	176	634	365	66	..	..	431	52	2,864	8
Totals .	1,709	1,114	3,123	1,889	399	32	4	2,314	183	9,851	40
1842											
Quarter to 31 Mar.	493	223	715	373	85	..	..	458	70	3,416	9
,, 30 June	298	253	551	415	82	..	..	497	54	2,657	17
,, 30 Sept.	277	230	507	354	89	..	..	443	47	2,799	..
,, 31 Dec.	376	204	580	379	84	..	..	463	43	2,573	8
Totals .	1,444	910	2,353	1,521	340	..	..	1,861	214	11,445	34
1843											
Quarter to 31 Mar.	528	212	740	457	78	..	4	539	59	2,506	3
,, 30 June.	484	191	675	438	92	16	3	549	47	2,153	11
,, 30 Sept.	553	185	738	417	83	25	1	526	39	2,253	8
,, 31 Dec.	588	237	825	478	92	12	2	584	45	1,929	12
Totals .	2,153	825	2,978	1,790	345	53	10	2,198	190	8,841	34
1844											
Quarter to 31 Mar.	629	318	947	647	100	12	2	761	50	2,261	15
,, 31 June	427	241	668	330	127	16	1	474	41	..	16
Totals .	1,056	559	1,615	977	227	28	3	1,235	91	..	31

according to a Plan adopted at the recommendation of the Author, and giving the or otherwise; the Deaths, whether under Physicians or Surgeons, the Average Medical or Surgical; and other particulars.

Admissions.		Discharges.		Deaths.		Average No. in the House.		Average Stay.		
Physicians.	Surgeons.	Physicians.	Surgeons.	Physicians.	Surgeons.	Physicians.	Surgeons.	Physicians.	Surgeons.	
								Days.	Days.	1837
351	242	273	197	72	4	79	105	25	62	Oct. 1 to Dec. 31.
										1838
411	248	296	234	117	4	112	145	27	40	Quarter to 31 Mar.
385	222	337	263	82	8	89	133	25	50	,, 30 June.
381	229	322	236	65	5	77	96	21	40	,, 30 Sept.
426	266	293	203	63	16	103	124	22	37	,, 31 Dec.
1,603	965	1,248	936	327	33	95	124½	23¾	41¾	Totals.
										1839
362	280	287	215	82	12	118	157	25½	38¼	Quarter to 31 Mar.
356	258	339	271	73	13	109	152	27¼	43	,, 30 June.
425	318	399	279	70	8	121	159	20¾	32½	,, 30 Sept.
415	299	359	327	57	7	103¼	86½	24 1/12	26⅓	,, 31 Dec.
1,558	1,155	1,384	1,092	282	40	113¾	138½	24	34¾	Totals.
										1840
377	378	365	355	76	10	122	98	27½	22¾	Quarter to 31 Mar.
271	344	248	383	66	4	91	113	31¼	24¾	,, 30 June
326	312	259	388	53	15	102	137	29½	27	,, 30 Sept.
418	343	332	425	87	8	113	141	28½	30½	,, 31 Dec.
1,392	1,377	1,204	1,551	282	37	107	122¼	29¾	25¾	Totals.
										1841
496	501	329	508	123	11	121	152	26¼	31½=31·5	
304	342	219	300	79	7	108	117	22½	25	Quarter to 31 Mar.
267	379	237	290	47	8	89	91	19¼	24½=24·5	,, 30 June.
413	329	286	224	94	13	94	100	21 18½h.	22&20 h = 22·8	,, 30 Sept. ,, 31 Dec.
1,480	1,451	1,071	1,322	343	39	103	115	22	26	Totals.
										1842
265	254	313	248	95	18	119	99	20⅓	31&10h.=31·4	Quarter to 31 Mar.
296	255	255	242	69	8	105	84	26½	28⅞=28·85	,, 30 June.
291	233	225	218	50	9	84	84	24½	34	,, 30 Sept.
333	247	219	244	76	10	99	92	28⅔	29¼=29·25	,, 31 Dec.
1,185	989	1,012	952	290	45	101¾	89¾	23½	30¾=30·75	Totals.
										1843
456	266	328	223	110	16	112	101	24	29½=29·5	Quarter to 31 Mar.
373	250	311	262	73	11	103	83	24⅓	34	,, 30 June.
302	319	283	294	70	10	87	104	29½	26	,, 30 Sept.
366	338	250	332	81	6	108	118	29⅛	27¾	,, 31 Dec.
1,497	1,173	1,172	1,111	334	43	102½	101½	26⅔	26·8	Totals.
										1844
469	242	348	206	75	8	134	101	26½	33½	Quarter to 31 Mar.
345	310	245	163	77	11	119	132	31½	30	,, 31 June.
814	552	593	369	152	19	126·5	116·5	29	31·75	Totals.

From the table given on the two foregoing pages, I subjoin the admissions and deaths for the quarters respectively of the 6¾ years ending with June 1844 :—

	Both Sexes,—all Ages.		
	Admissions.	Deaths.	Ratio.
Seven First Quarters .	5,455	757	13·8
Seven Second Quarters .	4,676	581	12·4
Six Third Quarters . .	3,801	410	10·8
Seven Fourth Quarters .	4,800	594	12·3

According to this table the largest admission and mortality were both in the first or January quarters, and the least admission and mortality were both in the third or July quarters. The other two groups of quarters, viz., the second and fourth, had almost the same rates of mortality, viz., 12·4 and 12·3 per cent. The principal difference between this table and the preceding is a higher rate of mortality in every quarter of this latter table. In each we observe the highest and lowest rates fall on the same quarters, viz., the first quarters highest and the third quarters lowest. In each the second quarters stand next to the first in mortality, and the fourth quarters between the second and fourth.

Some years since, my brother, George Clendinning, B.M. (now withdrawn from the profession) made an analysis of the old journals of the infirmary for 14 years ending in 1835, in aid of inquiries I had then on foot, and obtained results which appear to differ from the preceding. The following table shows the contrasted results. The sum total of deaths from all causes was in the 14 years 3756 ; and in the 6¾ years (adding ⅙th to the third quarter's deaths), the total loss by deaths was 2410 :—

	G. C.	J. C.
	Mortality to whole Mortality.	Mortality to whole Mortality.
First Quarters. .	28·6 per cent.	31· per cent.
Second Quarters .	20·6 ,,	24·1 ,,
Third Quarters .	20·7 ,,	19·8 ,,
Fourth Quarters .	30 ,,	21·6 ,,

Sufficient reason, however, for this difference exists to explain it without impugning either the calculations of my brother or myself. It is this: we divided the year differently. He took the natural groups of months constituting seasons, beginning with March, April, and May as the spring quarter, and so of the rest of the year ; whereas I took the civil year, beginning, of course, with January as the first month of the first quarter. My results analysed on my brother's plan would give (on a total mortality something above 3400) 23·4 for spring, 21·2 for summer, 22·2 for autumn, and 32·8 for winter, per centages of mortality.

From this same table* it appears that in the 6¾ years there were admitted under the physicians, exclusively of the physician accoucheur, 9880 patients, and under the surgeons 7904, together = 17,784, or 2634 annually of both classes; and that the admissions from the W. H. (workhouse)

* See Table XI. pp. 304 and 305.

were 12,001, and those from O. D. (their own homes) were 6430; together = 18,431. It will be observed that the total of admissions under the physicians and surgeons falls short of those from W. H. and O. D. together by between 600 and 700 (658). This difference represents principally "casuals" or cases officially admitted to the W. H., but placed in the first instance for a time in the sick-house or infirmary under observation. Such are usually not entered in the common way as patients unless found to labour under some complaint, but are commonly transmitted to the other side in a day or two after admission. On the $6\frac{3}{4}$ years the admissions under the physicians were nearly 57 per cent., and those under the surgeons 43 per cent., of the whole regular admissions. The cures on both classes (physicians' and surgeons' patients) together were nearly 66 per cent. on the admissions, and 80 per cent. on the discharges of all sorts, exclusively of deaths.

The relieved or incurable (which, by the bye, ought not to be thus confounded) were, on both classes of patients, nearly 15 per cent. (14·6 on the admissions, and 17·5 on the discharges,) exclusively of deaths.

The discharges "by desire, uncured" were about 1·8 per cent. on the admissions; the irregular were something less than $\frac{1}{5}$th per cent. The puerperal cases (which are not included in any of the totals above given) were about 150 per annum; they amount at present to 200 per annum. The puerperals (or lying-in cases) were until lately received on the W. H side, and counted, therefore, O.D. cases: the mode of recording them formerly in use still continues, and they are not above included in the admissions under the physicians.

A presumable and increasing disproportion between the domestic accommodations of the parochial establishment and the general parochial population has been already adverted to, and the apparent increase of mortality in the wards of the infirmary has been conjecturally referred in part to that circumstance, and the necessity thence arising for narrowing the way into the infirmary and exercising a less indulgent superintendence and control as regards the granting of "doctor's orders" (*i. e.* the overseers' orders to the resident medical officers to examine applicants for medical relief, whether at their homes or at the infirmary), and a less lenient system of admission into the sick-house or infirmary. With a view to test the accuracy of that supposition, I have calculated the proportion of the admissions coming from the W. H. and O. D. (their own homes) respectively; and the following table gives the result so far as materials exist and are at my disposal:—

	Admissions per Cent.		Difference.
	From O. D., (or their homes.)	From W. H.	
1837, last 3 Months .	40 nearly.	59·3	+19·3
1838 ,, ,, .	36·	63·8	+27·8
1839 ,, ,, .	30·	70·7	+40·7
1840 ,, ,, .	37·5	62·4	+24·9
1841 ,, ,, .	45·	54·7	+ 9·7
1842 ,, ,, .	39·	61·2	+22·2
1843 ,, ,, .	28·	72·	+44·
1844, first 6 Months .	34·6	65·4	+30·8

According to this table, the proportion between the admissions into the sick-house from the W. H. and from O. D. (their own homes) has been nearly stationary. If we take the eight terms of the table in the fourth column (differences), and divide them into two sets of four each, we shall find the upper four terms of difference amounting to 112·7, and the lower four terms to 106·7, being not far from equality. The domestic accommodations of the W. H. have not been stationary, yet their enlargement has been inadequate, amounting to some 150 beds only, I think. The site of the W. H. is the property of the Duke of Portland, held on lease terminating some 30 years hence; which circumstance naturally creates an unwillingness to undertake a large outlay for new buildings.

Mortality.

The mortality in the 6¾ years on the admissions into the physicians' wards amounted to 21 per cent., and that occurring in the surgical wards to 3·1 per cent.; the mortality on both to 12 per cent. The mortality of those London hospitals which admit the general run of diseases, and therefore, most nearly correspond in their practical working with the infirmary, which admits all sorts without any other exception than small-pox, is well known to vary little from 10 per cent. The annual loss of life in the wards of the Middlesex, North London, St. George's, Westminster, and London Hospitals, amounts usually to between 9 and 11 per cent. St. Bartholomew's and St. Thomas's, which receive a large per centage of venereal cases, yield a smaller gross mortality; St. Bartholomew's, for example, contains in its foul wards some 150 beds. Now the mortality in those wards must fall short of 1 per cent., since the mortality of the Lock Hospital is usually under that proportion: the gross mortality of that noble institution must, consequently, be very materially lightened by the admission of, perhaps, 1000 or 1200 venereals annually; and this is, I think, confirmed by the fact (if I am rightly informed) that the mortality of St. Bartholomew's, if we exclude the foul wards, does not differ in any material degree from those of other hospitals.

But the chief reason of the relatively high mortality of the infirmary is the admission into its wards, indifferently, of all cases of pauper sickness, whatever may be the ages between birth and decrepitude—whatever be the stages in point of advancement, or the durations in months or years, or the nature and ulterior prospects (excepting only small-pox)—provided the applicant has a legal or apparent claim for parochial medical relief. It is not necessary to dwell on the invariably high relative mortality amongst nurslings and persons of extreme age under disease. But with respect to chronic organic diseases, which are *de jure* and *de facto* received as readily as any other cases into the infirmary, I shall stop for a moment to observe that 20 to 30 per cent. of our whole mortality is attributable to tubercular disease of the lungs, against the admission of which, as such, the doors of general hospitals are nearly closed according to rule, and, practically speaking, may be said to be held ajar, to be opened for their admission or gently closed in their faces, according to the exigencies or humour of the hour. The admissions of pulmonary tubercular disease mostly in advanced stages, and as such, into the infirmary, were in 1840 = 121 cases, and in 1842 = 129 cases. (I have not, unfortunately, the figures for any other year at hand, but as regards

such cases those were ordinary years.) Of these 94 died each year, leaving only some 30, who were sufficiently improved to be able to return to their occupations, or, as happened in a few instances, who preferred to retire from the infirmary in order to die at home in the bosoms of their families.

An additional circumstance contributing to our superior mortality is the retention of patients, if wishing to stay, until complete recovery, or death. Without assuming anything as between rate-payers and rate-receivers, I may say that, in point of fact, the man that is sick and poor and in possession of parochial rights does usually obtain admission into the infirmary, if he seek it, and that once admitted he usually remains there, if willing, until recovered or sufficiently relieved, or beyond human pain or help. The influence of this indefinite duration of treatment in the infirmary over the per centage of mortality need not be insisted on.

The surgical mortality of the infirmary, it has been stated, is somewhat less than half that of the surgical wards of our general hospitals, viz., between 3 and 4 per cent. instead of some 10 per cent. The reason is twofold :—1. Accidents are, in point of fact, comparatively, rarely received in the infirmary; and, exclusively of accidents, surgical practice always yields a much lighter amount of deaths than medical practice. Now accidents are a peculiarly favoured class of cases in our hospitals, and are provided for with an extra facility of admission into their wards, which is beneficial to all parties, but is not extended to other, often graver though less striking affections. Owing, then, to the high mortality of the class "accidents" amongst surgical complaints, the surgical mortality in our hospitals is comparatively much augmented, while on the contrary the surgical mortality of the Infirmary is relatively much lowered by the scanty admission of such cases. To this if we further add that about one-half of the patients admitted on the surgeons' side consists of persons (mostly children from the W. H. schools) suffering from chronic cutaneous affections, yielding no mortality of their own, viz., porrigo, psora, impetigo, lepra, &c., the account of our surgical mortality will stand thus;—viz. on one-half of the surgeons' cases there is, usually and properly speaking, no mortality; on the other half of their admissions the amount of deaths must be about 6 per cent.

Number of Patients and Duration of Treatment.

There remain but two topics for remark, viz., the average number under treatment and the average stay. From the table so often referred to (No. XI.), it appears that the average number of physicians' patients under treatment during the $6\frac{3}{4}$ years was 103·5, and the average of surgeons' patients 114; the number varied little during the period. If we add together the four upper terms (1837, 38, 39, and 40), and in like manner add together the four lower terms (1841, 42, 43, and 44), and divide each by 4, we find the daily averages as follows: for the former $3\frac{1}{4}$ years, physicians' 98·6, surgeons' 122·5; for the latter $3\frac{1}{2}$ years, physicians' 108·3, surgeons' 105·5. The physicians' daily patients, however, rose in the latter years about 10 per cent., and the surgeons' daily patients declined about 15 per cent. in the same period.

It appears from this table that the average stay (in the house or under treatment) varied little during the $6\frac{3}{4}$ years on the physicians' side, and was for the whole $6\frac{3}{4}$ years = 25·5 days; but that the average stay on the surgeons' has been reduced nearly 30 per cent., viz., from 41·6 days,

which is the average of the former four terms (1837, 38, 39, and 40), to 29·3 days, which is the average for the latter four terms (1841, 42, 43, and 44).

Summary.

It appears from the columns of the 11th table, taken in connexion with each other:—1. That during the $6\frac{3}{4}$ years which it covers, there passed through the Infirmary every month nearly 220 (219·5) patients; —2. That of these about 140 (after deduction for "casuals") were from the W. H. (workhouse), and 79 from O. D. (their own homes);—3. That 127 of them were admitted under the physicians (exclusively of the puerperals), and about 92 under the surgeons;—4. That 144 of them eventuated in cures, 26 of them in deaths, and the remainder proved incurables, or voluntary retirements, or "irregulars."—5. It appears further, from Table III. (page 296), that of those 219·5 about 96 were males and about 122 probably females;—6. And that about 16 were under 5 years of age, 86 under 15 years of age, and 34 over 60 years of age.—7. It appears also that about 11 were cases of pulmonary tubercular disease, and nearly 8 were discharges from the vesanial wards.*

On the Relative Liability of the Two Sexes to Insanity. By John Thurnam, M.D.

[*Read before the Statistical Section of the British Association at York, September 28th,* 1844.]

The opinion which appears to have recently obtained, that insanity is more prevalent amongst women than amongst men, has, I believe, originated in an erroneous method of statistical analysis. Dr. Esquirol, who appears to have inclined to this view, was at great pains in collecting information as to the proportion of *existing* cases of insanity in the two sexes in nearly every country of the civilized world; and, having found that, taking the average of different countries, the proportions were those of 37 males to 38 females, he concluded that his inquiry refuted the opinion which has prevailed since the time of Cælius Aurelianus,† that women are a little less subject to insanity than men.‡ In this view Esquirol is followed by Drs. Copland, Brown, and Millingen; and indeed, by every recent writer on insanity. It is, however, well known that, in all European countries, the proportion of adult females in the general population exceeds that of males. In England and Wales, according to the census of 1821, there was an excess, at all ages above 15 or 20 years, of about 4 per cent.; and, according to the more accurate census of 1841, an excess of 4 per cent. at all ages, and of about eight per cent. at all ages above 15 or 20 years. Of this general law, Esquirol was aware; but he does not appear to have known that, from 20 to 50 years of age, when, in this country at least, insanity chiefly occurs for the first time, there is a still greater excess of females; an excess which is higher from 20 to 30 years of age than it is subsequently; it being 12 per cent. from 20 to 30, 6 per cent. from 30 to 40, and 4 per cent. from 40 to 50, years of age. Thus, assuming

* For some years the expences of the sick-house (so far as they can be distinguished from those of the workhouse generally) have amounted to about 5*s.* weekly per patient, all ages and both sexes included.

† Cælius Aurelianus, "De Morbis Acutis et Chronicis," Amstel. 1709, 4to., pp. 326, 339.

‡ Prichard, "On Insanity." 1835, p 162. Esquirol, "Maladies Mentales," 1838, tome i., p. 37; ii., p. 676.

only a like liability of the two sexes to insanity, we should expect to find a much greater number of cases amongst women, and one corresponding to this excess of the same sex in the general population, at those ages when insanity chiefly occurs.

The only two institutions, however, that I am acquainted with in this country in which there has been any material excess of females admitted during extended periods are the hospitals of Bethlem and St. Luke; and in these there has been, at different and extended periods, an excess of women admitted amounting to 20, 30, and even 45 per cent. This, however, may depend on local circumstances peculiar to the metropolis; and, consequently, does not in any degree establish Dr. Haslam's opinion, that, "in our own climate, women are more frequently afflicted with insanity than men;" a statement which has been recently repeated by Dr. Webster in his remarks "on the Statistics of Bethlem Hospital."* That there may be something peculiar in the circumstances of the metropolis in connection with the prevalence of insanity in the two sexes, at least as regards the poorer and more dependent classes of the community, is a view which is confirmed by there having been a slight excess of females admitted both at Hanwell and in the licensed metropolitan asylums for paupers; though it is to be observed that, during the last five years, the excess at Hanwell, never very great, has been gradually diminishing, and up to 1843, only amounted to 2 per cent. According to the census of 1841, there appears to be a larger proportion of females living in the metropolis from 20 to 50 years of age, as compared with the kingdom generally; but whether the difference be large enough to account for the greater number of women admitted into the metropolitan asylums and hospitals is, perhaps, doubtful. The excess per cent., at these ages, of women over men appears to be in the proportion of 18 in the metropolis to 8 in the country; that is to say, there were, in 1841, living in England and Wales 100 men to 108 women, and in the metropolis 100 men to 118 women, at from 20 to 50 years of age. At all ages there appears to be a greater proportion of females in the metropolis than in England and Wales; there having been an excess of 13 per cent. at all ages, and of 19 per cent. at all ages above 20. Whatever may be the cause of the difference in the relative proportions of the two sexes admitted into metropolitan asylums, it does not appear to extend to the middle and upper classes of society; for in the licensed metropolitan asylums for private patients, (1833—40), there has been an excess on the side of males admitted amounting to 38 per cent.

But there is another fallacy in Esquirol's method of investigating this subject, in consequence of his having compared with each other the *existing*, instead of the *occurring*, cases of insanity in the two sexes. Were the progress of insanity the same in men as in women, and our object simply that of determining the relative liability of the two sexes to insanity, the comparison of the cases existing at one time, would serve as well as that of the numbers occurring during any given period. This, however, is not the case; for, as I have elsewhere shown, the mortality of insane men, on an average, exceeds that of insane women in the public asylums of this kingdom by 50 per cent. Thus we find that the excess in the mortality of males above females is, at the Retreat, at the rate of

* Haslam, "Observations on Madness," 2nd edition, 1809, p. 245. Webster, in "Medico-Chirurgical Transactions," vol. xxvi., 1843, p. 380.

37 per cent., in the metropolitan licensed asylums of 63 per cent., at Bethlem of 71 per cent., at Hanwell of 80 per cent., and at the York Asylum of 93 per cent.; the mortality in males being nearly double what it is in females. As the mortality of males in the general population is not more than 7 or 8 per cent. higher than that of females,* it will be evident that, out of equal numbers attacked, the existing cases of insanity in women will accumulate much faster than those in men; and that they will necessarily be much more numerous, as compared with the *occurring* cases. than will the existing cases in the latter sex. According to the "Report of the Metropolitan Commissioners in Lunacy," there were, in asylums of all descriptions in England and Wales, on the 1st of January, 1844—

Insane Persons.	Males.	Females.
11,272	5,521	5,751 : of whom there were
7,482 paupers.	3,532	3,950†

—being an excess on the side of females, of *existing* cases of insanity, of 4 per cent. in all classes, and of nearly 12 per cent. in paupers.

It may, perhaps, be objected to the results of any inquiry into the liability of the two sexes to insanity which is founded on the proportions of males and females admitted into public and private asylums, that, from various causes, women are more likely to be detained at home than men. As regards the middle and higher classes I believe this to be the case; but, as respects the pauper insane, I do not think that such a tendency can affect the results in any material degree. Women are, indeed, sooner rendered entirely dependent, as a consequence of mental disorder, than men; and I should conclude that any greater indulgence to, and tolerance of, the eccentricities of the sex, when the subjects of insanity, will be more than compensated by the frequently greater difficulty of effecting the removal to an asylum of the insane father, husband, or brother.

In order that the comparison of the occurring cases be a strictly accurate one, the proportions of the two sexes, at the several ages, *attacked with insanity* for the first time, should be compared with the proportions in which the two sexes, at the same ages, *exist* in the community in which such cases occur. The nearest approximation to this method which we have the means of employing is, by assuming that the proportions of men and women *admitted* into public institutions during extensive periods represent, as on the whole they probably do represent, the cases which *occur* for the first time. The following table is calculated on this principle. (See p. 313.)

On an examination of this table we ascertain that, in 24 of the 32 asylums which it comprises, there has been a decided excess of men in the numbers admitted. In many British asylums the excess amounts to 25, 30, and even 40 per cent.; and in the whole number of 32 asylums there is an average excess on the side of the male sex of 13·7 per cent. In the 9 English county asylums, contained in the table, the excess amounts to 12 per cent. Dorset is the only county asylum in which the proportion of women admitted has materially exceeded that of men.

* The mean annual mortality of England during four years, 1838—41, was 2·31 per cent. for men, and 2·13 per cent. for women.—"Fifth Report of Registrar-General," p. xi.

† Report, 1844, p. 184.

Table shewing the Numbers and Proportion of each Sex, out of 71,800 *Cases, admitted into various Asylums.*

Name of Asylum and Period.	Numbers of each Sex Admitted.		Proportions per Cent. of each Sex.		Excess per Cent. of one Sex over the other.	
	Male.	Female.	Male.	Female.	Male.	Female.
1. Bloomingdale New York . . . (20½ years, 1821-42)	1,692	906	65	35	86	.
2. Siegburg (9 years, 1825-33) . .	404	226	64	36	78	.
3. Dumfries (4 years, 1839-43) . .	147	92	61·5	38·5	59	.
4. Charenton (11 years, 1815-25)* .	1,245	804	61	39	54	.
,, (8 years, 1826-33) . .	932	625	60	40	49	.
5. Schleswig (15 years, 1820-35) .	342	224	60	40	52	.
6. Licensed Metropolitan Asylums, not paupers, (1833-40). . .	1,419	1,028	58	42	38	.
7. Perth (11 years, 1827-38). . .	190	141	57·5	42·5	34	.
8. Cornwall (22 years, 1820-42). .	407	310	57	43	31	.
9. Nottingham (31⅓ years, 1812-43).	937	726	56·3	43·7	29	.
10. Armagh (16½ years, 1825-41) .	649	505	56	44	28	.
11. Clonmel (7 years, 1835-42) . .	206	162	56	44	27	.
12. York Asylum (25⅔ years, 1814-40)	768	607	56	44	26	.
13. Lancaster (26 years, 1816-42) .	2,042	1,599	56	44	27	.
14. Maidstone (5 years, 1833-38) . .	195	158	55	45	23	.
15. Glasgow (28 years, 1814-42) . .	1,456	1,191	55	45	22	.
16. Richmond, Dublin . . . . (5 years, 1832-39)	331	277	54·5	45·5	19	.
17. Lincoln (21⅔ years, 1820-42) . .	467	391	54·5	45·5	19	.
18. Dundee (22 years, 1820-42) . .	496	427	53·7	46·3	16	.
19. Gloucester (20 years, 1823-42) .	661	588	53	47	12	.
20. Frankford, U.S. Society of Friends (25 years, 1817-42)	405	379	52	48	7	.
21. Worcester, U.S., (10 years, 1833-42)	806	751	51·8	48·2	7	.
22. Hartford, U.S., (19 years, 1824-43)	640	607	51·3	48·7	5	.
23. Wakefield (23 1/10 years, 1818-42).	1,527	1,479	51	49	3	.
24. Belfast (13 years, 1829-42) . .	621	622	50	50	.	·16
25. Woodbridge, (13 years, 1829-42).	499	500	50	50	.	·20
26. Carlow (10 years, 1832-42) . .	247	250	49·7	50·3	.	1·2
27. Hanwell (11⅓ years, 1831-42) .	1,189	1,219	49·3	50·7	.	3
28. Cork (13 years, 1827-39) . . .	954	1,009	49	51	.	5
29. Licensed Metropolitan Asylums paupers† (6 years, 1833-40) .	1,479	1,520	48	52	.	7
30. York Retreat, Society of Friends, (44 years, 1796-40)	282	333	45·8	54·2	.	18
31. Dorset (11⅓ years, 1832-43) . .	184	224	45	55	.	21
32. Bethlem, curables‡ . . . . (20 years, 1823-42)	1,782	2,622	40·5	59·5	.	47
Total of the above (1796-1843).	25,601	22,502	53·2	46·8	13·7	.
	48,103					
9 English County Asylums; 8, 9, 13, 14, 19, 23, 25, 27, and 31 .	7,641	6,803	53	47	12	.
33. Bethlem, all cases . . . . . (46 years, 1748-94)	4,042	4,832	45·5	54·5	.	19
34. St. Luke's, curables . . . . (82 years, 1752-1834)	6,037	8,786	40·7	59·3	.	45·5

For other Metropolitan Asylums, see also 6, 27, 29, and 32.

* Esquirol, "des Maladies Mentales," tome ii., p. 663 and 668.
† Haslam, "Observations on Madness," second edition, 1809, p. 245.
‡ Webster, "Medico-Chirurgical Transactions," vol. xxvi. 1843, p. 381.

Whether in this asylum an unusually large provision has been made for females, and consequently a larger proportion of applications for the admission of men have been rejected, or whether in the county of Dorset any peculiar causes are actually in operation which are capable of explaining such an exception to a general law, I am at present unable to determine.

Having thus shewn that, in the principal hospitals for the insane in these kingdoms, the proportions of men admitted is nearly always higher, and in many cases much higher, than that of women; and as we know that the proportion of men in the general population, particularly at those ages when insanity most usually occurs, is decidedly less than that of women, we can have no grounds for doubting that men are actually more liable to disorders of the mind than women.

It is always satisfactory when those reasonable conclusions, which we have previously formed from general considerations of the nature and tendencies of the particular causes which are in operation in any class of facts, are confirmed by accurate statistical inquiry. From a just consideration of the differences in the physical and moral constitution, as well as in the generally prevailing external circumstances of the two sexes in civilized communities at the present day, it was, I think, *à priori*, highly probable that men should possess a somewhat greater liability to mental disorders than women; and this was a conclusion at which, independently of any statistical inquiry, the ancient physicians had even arrived. And it is thus important to observe, that it was by *a faulty application of the methods of statistical analysis* to this question, by the deservedly distinguished Esquirol, that a contrary conclusion was come to by that diligent, but, in statistical questions, not always accurate, inquirer; and that it has been chiefly on his authority, and on that of authors who, on this subject, have copied from him, that we have been in danger of admitting the erroneous doctrine that women are more liable to insanity than men.

It is still highly probable that different countries,* and perhaps even the same country at different periods, as well as different communities and different ranks and classes in the same country, may vary very much as regards the proportion in which men suffer from insanity more than women. Thus, it appears tolerably well ascertained that a larger proportion of women, relatively to the other sex, become insane in France as compared with England. Though, as we have seen, this is less certain as respects the metropolis when compared with the rest of this country. In this respect, we have seen that the statistics of our own metropolis appear to resemble those of France, rather than those of the rest of England.

In this point of view, the experience of the Society of Friends is not without considerable interest. At first sight it might appear that, in this community, women are actually more liable to insanity than men; for, without any greater facility existing for the admission of females, the number of women, members of that society, who have been

* The above table shews that, during 15 years at the asylum at Schleswig, Holstein, the proportion of men admitted exceeded that of women by 52 per cent.; and at Siegburg, near Bonn, on the Rhine, during 9 years, by 78 per cent. According to the official return of Dr. Holst, the existing number of the insane throughout Norway, in the year 1825, was in the proportion of 1 to 508½ of the male, and 1 to 597½ of the female population.

admitted into the Retreat has exceeded that of men by 18 per cent., or, in other words, only 45 men have been admitted to 55 women.* But it is requisite to know the relative proportions of the two sexes in the Society of Friends, as a body, before we shall be justified in determining that insanity is really more prevalent amongst the females of that community. By returns, however, from all parts (each "monthly meeting") of England and Wales, it appears that in the Society of Friends the excess of women over men, at all ages, amounts to about 20 per cent.; and there can be little or no question that the excess of *adult* females is still greater.† Indeed, after 15 years of age, before which insanity seldom occurs, we can, I think, scarcely estimate the excess of females over males in this community at less than from 30 to 35 per cent. And thus assuming, as there is every reason for doing, that, as respects the proportions of the two sexes attacked, the experience of the Retreat represents that of the Society at large, it will appear that, in this community, there are still from 10 to 14 per cent. more men than women attacked with mental derangement. This is an excess on the side of men, considerably less probably than that which prevails in the kingdom generally. The progressive accumulation of females in an hospital for the insane is well illustrated by the experience of the Retreat; where, at the end of 45 years, the women exceeded the men by 30 per cent.; and where the average number of women resident during the whole period was 35 per cent. higher than that of men. At the asylum for the Society of Friends at Frankford, Pennsylvania,‡ (1817—42,) the proportion of men admitted exceeded that of women by 7 per cent. But in the general population of Pennsylvania and the adjacent states, in common more or less with nearly all newly-settled countries, the proportion of males exceeds that of females by about 4 per cent., and, at from 20 to 40 years of age, by 6 per cent. There, however, may be, and probably is, less difference in this respect in the Society of Friends in the states alluded to, or the women may even preponderate in this community.

In nearly all points of view it may, in conclusion, be stated, that women have an advantage over men in reference to insanity; for not only do they appear to be somewhat less liable to mental derangement than men, but, when they become the subjects of it, the probability of their recovery is on the whole greater, and that of death very considerably less. After recovery from a first attack, however, the probability of a relapse, or of a second attack, is perhaps somewhat greater in women than in men. Still the more favourable results, as regards the

* The numbers in the table refer to cases of all descriptions admitted at the Retreat; but the proportions are the same when members of the Society of Friends are separately considered.

† This larger number of women in the Society of Friends may, no doubt, be chiefly attributed to the larger proportions of men who emigrate, and leave the Society, and are disunited from it, for, on an examination of the registers of the Society from 1800 to 1837, I find that the births registered were in the proportion of 105·7 males to 100 females; viz. 8207 boys and 7759 girls. In the whole of England and Wales, in three years, 1838–1841, the births registered were in the proportion of 104·8 boys to 100 girls.—"Fourth Report of the Registrar-General," 1842, pp. 9, 10.

‡ This asylum is more particularly appropriated to the Society of Friends in the states of Pennsylvania, New Jersey, and Delaware; but patients from other states are also admitted.

female sex in all these particulars, appears to be much less marked at the Retreat than in nearly every other institution with which I am acquainted. This is worthy of notice, as it is probably due to the greater general regularity of life in the men of this community as compared with that of men in the community at large; or, at least, than in those parts of it which furnish inmates to the asylums compared.

Retreat, York, August, 1844.

Notes on the Report of the Royal Commissioners on the Operation of the Poor Laws in Scotland, 1844. By J. P. Alison, Esq., M D.

[*Read before the Statistical Section of the British Association at York, October 1st,* 1844.]

Dr. Alison stated, that as the result of many of his own observations and inquiries, and those of others who had associated themselves with him to investigate this matter statistically in Scotland, had been read in the Statistical Section of the British Association, he was anxious to lay before them some extracts from the evidence, lately printed as an Appendix to the Report of the Royal Commissioners, who had been appointed to inquire into that subject, by which he thought that those previous statements were amply confirmed; but that in laying these results before the Section, he would confine himself to facts, and as nearly as possible to statistical facts, and abstain from all discussion of remedial measures.

He said that, on one point the result of the inquiries of the Commissioners appeared at first sight to be at variance with his previous statements, viz., as to the number of poor, natives of country districts, who burden the larger towns in Scotland. It appears that, in general, about two-thirds of the regular paupers in those towns are not natives, and there is a general complaint in the towns, of this burden falling on them, in consequence of the defective relief in country districts, and of the law of settlement by three years' residence; but the Commissioners report that there had been much exaggeration in those statements, and that there are few paupers in the towns who have not lived there many years; therefore, that an extension of the term requisite for obtaining a settlement would make little difference in this respect.

On this he observed, that he had always represented the great mass of poor from the country, who resort to the towns in Scotland, as "coming originally in search of work," and afterwards becoming burdensome, not in the first instance as *paupers*, on the parish lists, but as *destitute poor*, subsisting, for the most part, on *voluntary* charity, either of individuals or associations; and had explained how greatly the number of the destitute poor in Scotland *exceed* the number of regular paupers; therefore, that the result of the inquiries of the Commissioners, being nearly confined to the statistics of the paupers, does not invalidate his previous assertion.

In illustration of this, he pointed out six different classes of persons, often reduced to extreme destitution in Scotland, but who do not in general appear on the lists of paupers at all, and referred to the evidence published by the Commissioners in proof of this; and of all those he asserted, that they are found chiefly in the towns, seeking either for occasional employment, or for voluntary charity. He explained, 1. The

case of the *able-bodied* unemployed poor. 2. The case of the *temporarily* disabled by sickness or injury. 3. The case of applicants for the legal relief, to whom that relief is long delayed. 4. The case of those to whom relief is refused, because the Kirk Sessions "have not funds in hand" for them. 5. The case of those whose settlement is disputed, and interim relief refused. 6. The case of the "dissipated and undeserving poor," and their children, who are "kept at bay" by the parochial authorities; in consequence of which he said he had known various instances of children dying of the effects of cold and hunger.

Having thus explained the fallacy of the statement of the Royal Commissioners on this point, he proceeded to say that on all other points the evidence taken by the Commissioners not only amply confirmed his former statement, but in several instances exceeded his anticipation; and in proof of this he read extracts from the evidence as to the following particulars; almost all of those extracts being from the evidence of clergymen, magistrates, or other public functionaries.

1. The extent of destitution in many of the towns, the privations, as to food, fuel, and clothing, endured by many of the inhabitants, and the necessity of mendicity to support life, both in the case of regular paupers, and of persons excluded, on the grounds above stated, from the legal relief; especially in the case of able-bodied persons and their families, often of good character, and reduced by circumstances quite beyond their control.

2. The extent of vagrancy, consequent especially on depressions of trade in the manufacturing districts, extending from the Borders even to the Orkney Islands, and forcing on many practical observers the conviction, that some fund should be provided for supporting the unemployed at home.

3. The diffusion of fever, particularly of that new form of fever which has sprung up since 1842, almost exclusively in Scotland, and prevailed to an unprecedented extent, which has been proved by individual inquiries, extending to above 1,700 persons, to affect that minority of the population who are destitute and unemployed, not only in *a larger proportion*, but in an *absolutely greater number* than all the rest of the community; and has very frequently been diffused through the country by the destitute vagrants just mentioned.

4. The very inadequate allowances to widows, and the frequent neglect of orphans, and the consequence, distinctly resulting from this cause, and from the absence of any legal protection to the unemployed, in the increased temptation to crime. This was stated as the general result of observations made in all the gaols in Scotland, but was especially illustrated by tables, furnished by Mr. Brebner, governor of the gaol at Glasgow, one of which comprised 258 cases of persons committed to that gaol in one year, of whom he could say with certainty, that it was want, and not inclination, which led them to commit crimes; and others gave the particulars of no less than 79 persons, 72 of them females, who in one year became *voluntary* inmates of the gaol, secluding themselves from the world, and submitting to the discipline of a prison, for the sake of the protection it afforded. Many others sought a similar protection, and could not be admitted; and it having been thought necessary to dismiss these voluntary prisoners, as unfit inmates of a gaol, more than half of them returned in a short time as criminals, the sacrifice to which

they had formerly subjected themselves in order to avoid crime, furnishing the clearest evidence, that the crimes which they subsequently committed were the effect of want, not of vicious inclination.

5. The circumstances under which recourse has lately been had to assessments, as they are thought to be inevitable, in various towns in Scotland, particularly Inverness, Stirling, Arbroath, Stranraer, and Girvan, all illustrating the general fact, that the numbers and sufferings of the destitute poor had been rapidly increasing, and their feelings of independence had given way, *before* the assessments were ordered, so that no part of the increased destitution of those places could be referred to the assessments as its cause.

6. As a contrast to this increasing misery where there have been no assessments, the "sound and comfortable state" of Berwickshire as to its poor, where assessments have been long general, and the allowances to the poor, and even aid to the able-bodied when thrown out of employment, nearly on the same footing as in England; and where there is no beggary, very little intemperance, much industry, abundance of private charity, and a population almost stationary as to number.

7. Contrasting, again, with this state of Berwickshire, the miserable condition of the poor in the greater part of the highlands and islands, where the Poor Law is a dead letter, and the proprietors, in many instances, contribute nothing to the support of the poor, where the want of all the necessaries of life is most severely felt, and a "parasitical population" has been gradually formed, engaged during the greater part of the year in no employment, and preying, not indeed on the capital, but on the industry of the country, and which must be removed or employed before any improvement can take place, but in which, nevertheless, early and improvident marriages are more complained of than in any other part of Scotland.

These last classes of facts were stated as fully and satisfactorily illustrating the propositions formerly laid down by the author, as to the effect of an adequate provision for the poor in *restraining* the increase of population, in two distinct ways, 1. By maintaining the standard of comfort among the people; and, 2. By making it the obvious and immediate interest of landed proprietors, to throw obstacles in the way of early marriages and excessive reproduction.

The Statistics of the Free City of Frankfort-on-the-Main. By Lieut. Colonel W. H. Sykes, F.R.S.

[*Read before the Statistical Section of the British Association at York, September 30th,* 1844.]

I am not aware that the statistics of a German city, more particularly a free city, are before the public. Independently of the novelty of such statistics, I presume they will furnish matters for comparison with statistical facts from England, either confirmatory of apparent physical or moral laws deduced from series of facts, or exhibiting antagonist matters which may render further research necessary, both in our own and other countries; that all doubts may be removed of the quality and bearing of the data with which the legislator may propose to operate in

his benevolent attempts to improve the condition and prospects of society.

I must beg some indulgence for my paper, for I have not any pretensions to the character of a German scholar, and I have laboured under the disadvantage of completing my translations since my return to England without aid; and I may in some instances not have given the perfect sense of my text. My figured statements, however, are I hope free from this drawback, as they are derived from tabulated official or public documents, and cannot be so readily misunderstood as the involved construction of German phraseology. The historical matter, and the notices respecting the public institutions, are derived from a very well got up Manual of Frankfort, by J. H. Ludwig, published in 1843. The statistical tables of educational and literary establishments are taken from the Transactions of the Geographical and Physical Society of Frankfort. The vital statistics are from official sources; and some matters are derived from verbal communications. I should have been glad to have made my acknowledgments publicly to my German friends for their kind aid; but I am not quite satisfied that in the present state of society in Frankfort it would be acceptable to them. I therefore abstain; but they will understand that I am not the less grateful for their kind promotion of my objects.

Although the present paper will embrace the general statistics of Frankfort, yet, as my principal object is the illustration of the vital statistics of the city, I shall treat the other branches in a more cursory manner than their importance and interest would seem to authorise.

Frankfort is seated on the right bank of the Main, in an open sandy plain, about 20 miles above the junction of the Main with the Rhine. Its elevation above the sea is 317 feet only. Like other places with claims to antiquity, little is known of its early history; but it has its fable (and that of Frankfort is quite Oriental) accounting for its foundation. The Franks were in the habit of crossing the river in their excursions, but much higher up. At last they were led to the discovery of the ford near which Frankfort now stands, by observing a *white deer* pass the river: henceforward they passed the river at the same place, whence resulted the name of Frankfort, or Ford of the Franks. Whether Frankfort-on-the-Oder derived its name in a similar manner, my information does not enable me to say. It was probably a hunting seat of the Frank kings, and may have owed its gradual increase to the usual attractions of a royal residence. On the 20th of July, 794, Charlemagne held a church assembly here, and it is supposed that he had previously built St. Mary's Chapel. In the same year the suburb of Sachsenhausen, on the opposite bank of the Main, was settled by some Saxons who had accompanied the emperor; and to this day the inhabitants consider themselves as of a distinct race from the people of Frankfort. Louis the German, in 843, made Frankfort the principal city of the eastern part of his dominions; and from this period it appears to have increased, but its prosperity was most probably chiefly owing to many of the German emperors choosing to be elected and crowned here. The portraits of such as were crowned at Frankfort are painted in niches in the building called the Emperors' Hall: and it is a somewhat curious coincidence that the last vacant niche in the hall was filled up by the last German emperor, Francis II., who reigned from 1792 to

1806, when Buonaparte dissolved the German empire. The first was Konrad I., the Frank who reigned from 911 to 918. In all there are 44 portraits. The elections of the emperors took place in the open air on a particular spot; and the *armed* crowds indicated their assent by clashing (Klappern) their swords and shields against each other, or shield against shield, and sword against sword; and a spot within Frankfort, not yet wholly covered with buildings, is called the Klapperfeld, or "*Clashing-field*," to this day. Frankfort has been subjected to numerous vicissitudes of capture and recapture, internal commotions, and disastrous and extensive fires; so that there are few vestiges of buildings above 150 years old. In the first quarter of the 18th century 3 fires destroyed above 1000 houses. In the first, on the 14th of January, 1711, above 500, including the Jews' quarter. That in 1719 destroyed 432 houses in 24 hours; and that in 1721 destroyed 150 in the Jews' quarter. A somewhat curious fire was that of burning the English manufactures stolen from the shops in 1810, in compliance with the Berlin decree of Napoleon. Frankfort, like some other Christian cities and states, has distinguished itself for its barbarous, and cruel, and bloody persecution of the Jews at different times. In 1240, 180 were put to death; and some time afterwards continued persecution drove the Jews to such despair, that they set fire to their dwellings, by which half the city was destroyed. In 1349, at the time of the appearance of the plague in Frankfort, in common with other cities of Germany, the Jews were accused of having poisoned the wells, and a band of fanatic monks, aided by a population they had excited, set fire to the dwellings of the Jews, and threw such of those miserable people as fell into their hands into the flames. Such of them as escaped death were *sold*, "body and goods, profit, pleasure, and service," —for such are the terms used,—by the Emperor Charles IV. to the authorities of Frankfort for the sum of 15,000 pounds weight in farthings.* In 1417 these unhappy people were reduced to 2 families; 12 years later they consisted of 6 families: and in 1495 they amounted to 104 souls only. In 1462 they were prevented from building or dwelling near a Christian church; were confined to one narrow locality, which grew into the Juden Gasse, or Jews' Lane, which was not only closed at both ends by gates every evening, but on Sundays and festivals the inhabitants were interdicted from quitting the lane at all, and could only appear abroad at any time in a prescribed garb. In 1614, in a revolt of some of the tradespeople, the Jews were plundered on the charge of usury. The restrictions on them in subsequent times were gradually relaxed, and when the Prince Primate had the city given to him by Napoleon, he endowed the Jews with the privilege of citizens; which privilege was taken from them, when the city was again declared "*free*." This class of inhabitants now amounts to a seventh or an eighth of the population.

The buildings of Frankfort have a palatial character, that is to say, they are generally large, lofty, and imposing, being occupied in floors, or parts of floors (there being sometimes a double kitchen on each floor), as was the case in Edinburgh formerly. At Frankfort even some of the ambassadors are only tenants in common with other parties. The defects of Frankfort are, the want of foot pavement in the streets, and the town not being lighted by gas, and the defective drainage, which

* Heller is the term; the twelfth of a penny English.

renders the atmosphere of some of the princely buildings a perfect pollution; the noisome effluvia from the cesspools having an unimpeded exit into the passages and chambers, from the want of proper water-closets or traps. It boasts, however, one of the most agreeable promenades in Europe; the former ramparts, ditch, and glacis having been levelled, and the ground thus obtained, surrounding three-fourths of the city, planted with shrubs and flowers, through which there are winding walks, together with a continuous carriage drive between fine trees, from the river on the west, round the skirts of the town, to the river on the east.

Government of the City of Frankfort; its Constitution [*Staatsverfassung*] *and Administration* [*Verwaltung*].

Frankfort is called a free city, and great care is taken in all public lists, official documents, the city seals and stamps, that the word Frankfort be preceded by its adjective "free." In very early periods after its Frankish foundation, the tradespeople and artisans associated themselves in guilds, and made the weight of their associations be felt. Frankfort was not a dependency of any particular prince; and much of municipal matters appear to have been left to the citizens, the oldest being placed at the head of the guilds, and constituting a kind of rath or council. But it was ruled for centuries by an officer of the German emperor, called a Vogt or bailiff, and had to pay a fixed tribute. Henry VII. gave the citizens a charter in 1220. In 1254, William gave them the privilege, confirmed by later emperors, that the city should never be transferred from the protection of the empire (emperor). In 1372, Charles IV. sold the imperial bailiffship over the city to the city authorities, thus leaving the people to their own government, although burthened with a tribute, and therefore not wholly free. From 1408 until the dissolution of the German empire, no essential change took place in the numbers of the council, or forms for governing the city. Matters, however, did not always run smoothly with the governing body, for in 1612 the bulk of the citizens finding that the families of their elders had gradually monopolized all power, and were dissipating the revenues of the city in feasting and banquets, and involving it in heavy debt, combined to force the members of these families who were in the council to resign their seats. This was resisted, and a commotion ensued, headed by three tradespeople—a pastry-cook, a tailor, and a joiner—who seized the gates, captured the arsenal, and overpowered the guards. This led to an imperial commission being sent to investigate the affair, but it was only by force that order was ultimately restored in 1614. The emperor Matthias directed the landgrave of Hesse Darmstadt, and the Kurfürst (Elector) of Mayence, to effect this object. The pastry-cook (Fettmilch), and six of his colleagues were beheaded in the horse market, others were whipped and fined, and the guilds and citizens were compelled to pay to the emperor a sum of 50,000 florins as smart money. I have only adverted to this circumstance in proof, that the presumed freedom of the city was illusory—the emperor's commissions running at all times within the walls; and he exercising the right to quell by force of arms all disputes of the citizens respecting municipal government. The power of the guilds, however, was shaken by the outbreak, and some abuses were removed.

In the first half of the 18th century, the complaints of the citizens

were again loud against the council. Scrupulously following a legal course, the citizens with difficulty obtained an imperial commission to inquire into the defects of the administration. The result was the formation of the standing Bürgerausschuss, or citizen representation, as a check upon the council.

A better understanding between the council and the citizens, was the result of this amelioration. In the French wars, however, Napoleon Buonaparte gave Frankfort to the Prince Primate, Charles of Dalberg, who possessed it from 1806 to 1813. This prince appears to have had some liberal views, for he conferred upon the Jews the right of citizenship, a distinction which had hitherto always been denied to them. The battle of Leipsic released Germany from the dominion of the French, and the allied monarchs permitted Frankfort to resume its former self-government, which was confirmed by the congress of Vienna. Parties, however, were not fully satisfied, and after some struggles, what is now called the "Constitution," was voted by the citizens at large on the 17th and 18th of July, 1816; on the 19th of July, it was proclaimed by the senate, and on the 18th of October, the constitution was sworn to both by senate and citizens. The old princely families of Limpurg and Frauenstein lost their privilege of having a certain number of seats in the council, the Jews lost the privilege of citizenship conferred upon them by Charles of Dalberg, and were left without political rights, and with some limitation in respect to the number of marriages they might annually contract.

I now come to speak of the political constitution (Staatsverfassung) and administration (Verwaltung) of the city. The principle is professedly representative, the constituent body being composed of citizens who are Christians of any denomination, excluding Jews and others not Christians. The powers of government rest in three distinct bodies,—the Senate (der Senat), the representative body of the citizens (der Ständige Bürgerausschuss, or Bürgervertretung), and the legislative body (der Gesetzgebende Körper).

The Senate consists of 42 members, and is divided into three benches. The first comprises 14 members, and is called the Schöffen (oldest senators), together with four syndics learned in the law; each of these persons has a salary of 2600 florins per annum. The next bench is called the Senators, comprising 14 members, each of whom receives 2400 florins per annum. The third bench is that of the Councillors (Rathsverwandten), also consisting of 14, each of whom receives 1200 florins per annum. The second bench is composed of jurists and merchants, and the third has 12 members from the guilds of the handicrafts, and two from that body of citizens who do not belong to the guilds. Vacancies in the first bank are supplied from the second by seniority, and vacancies in the second and third by an election consequent upon the ballot. Members of the Senate hold office for life. Not more than four Roman Catholics, nor more than three Calvinists, are admissable into the Senate; the rest of the body consists of members of the Lutheran church. On the 1st January every year the Senate appoints two Bürgermeisters, a senior and junior; the first is taken from the first bench, and the younger from the second bench; both are chosen by ballot by the senators. The superior Bürgermeister presides over the Senate, is at the head of the armed force, and conducts the foreign relations.

The younger is at the head of the police and of all matters appertaining to the citizens and the guilds. The senior Bürgermeister has 600 florins allowed to him for a couple of public dinners.

The second body in the government consists of the representatives of the citizens, called the Bürgervertretung, numbering 60 members, under the presidency of one of the senior members, who is changed every three years. This body controls the receipts and expenditure. A committee of nine audits the accounts. The representatives are elected for life, and are not paid, with the exception of the nine auditors, who receive 900 florins per annum each. Vacancies are filled up by a committee chosen by ballot of six members of this body, and six members from the 45 or democratic members of the legislative body, which committee chooses the citizens to fill up the vacancies.

The Legislative body (der Gesetsgebende Körper) forms the third portion of the government. It consists of 85 members; 20 of them belong to the Senate, 20 to the Representative body; and the remaining 45 are composed of the Christian citizens of all denominations, taken from the Electoral College, called the 75, which is elected annually from three classes of the community—the first of which comprises the nobles, learned men, the public servants, and those not belonging to the guilds; the second class comprises the merchants and traders; and the third the operatives. The eight dependent villages of the city have also a right to send 11 deputies to this body when matters are to be discussed relating to their interests. The Legislative body has a president, two vice-presidents, and four secretaries. Besides law-making, this body grants taxes and looks to their collection; fixes the military defence; approves state contracts; arranges the budget; and, above all, supervises the economy of the state. The members of the Legislative body are not paid.

The courts for the administration of criminal and civil justice are as follow:—

1. The Supreme Court of Appeal (Das Ober-Appellationsgericht) is formed by delegates from the Senates of the four free cities of Lubeck, Bremen, Hamburg, and Frankfort. Its seat is in Lubeck. Frankfort and Lubeck each send one delegate, and Hamburg and Bremen two each. The presidentship changes yearly.

2. The Appellate and Criminal Court (Das Appellations-und Criminalgericht) takes cognizance of civil matters above the value of 300 florins, appealed from the lower courts, and considers appeals in penal cases. It consists of the four syndics of the Senate, together with two senators, and their president is elected for three years.

3. The City Court (Das Stadtgericht) has the initiatory process in civil matters above the value of 300 florins. It has cognizance, also, of matrimonial affairs, trusts, &c. It acts, also, as an appellate court from the Town and Country Offices. It is presided over by a director, vice-director, and by four councillors. There is a separate city commission for summary decisions relating to freights, exchange, and other mercantile matters.

4. The Guardian and Register Office (Das Curatel-Amt). This office takes cognizance of guardianships, trusts, &c. Two senior senators and one of the third bank administer the duties.

5. The Police Court (Das Polizeigericht) has the usual powers of such an office in the city and its dependencies. It is under the presidency of the junior burgomaster, with whom is associated one judicial senator, two judicial assessors, and two actuaries.

6. The Criminal Examination Office (Das peinliche Verhör Amt) is conducted by a counsellor of criminal law and a judicial actuary. In weighty criminal inquiries the younger burgomaster presides in this office.

7. The City Justice Office (Das Stadt Justiz Amt) is the initiatory court for all civil processes, the amount of which does exceed 300 florins. It is divided into three sections, and the duties are administered by two town bailiffs, one town assessor, and three judicial actuaries.

8. The Land Justice Office (Das Land-Justiz-Amt) is for the territorial dependencies in matters not exceeding the value of 300 florins, and decides when a voluntary jurisdiction is given in contracts, hypothecation, guardianships, partition of property, &c. The officers employed are a bailiff and two clerks.

9. Office for Mortgages and matters relating to Fixed Property (Die Hypotheken-Transscriptions und Währschafts-Behörde). This office has jurisdiction only respecting immovables. The business is conducted by a mortgage book-keeper and his assistant, under the guidance of the City Court directors.

10. The Fiscalat is the City Exchequer, and has cognizance of many matters.—proposals of guardianship, signing and sealing of obligations, permission to bury, the control of public auctions, &c., &c. A fiscal and judicial lawyer manage the office.

11. The Military Levy Commission (Die Aushebungs-Commission) consists of two senators, two deputies of the Commons' chamber, and one officer of the line, aided by two physicians to determine the capabilities of those called upon to serve. This Commission has the organization of the military levies when called into actual service. About 5000 men are upon the rolls.

12. The Building Office (Das Bau-Amt) regulates buildings, and to its duties are added those of the departments of lighting, supply of water, and inspection of conduits, city promenades and gardens, pavements, and Fire Engine Institution. This office is directed by three senators, and one deputy of the Commons.

13 The Censors' Office (Die Bücherinspection) is under three senators.

14. The Central Finance Commission (Die Central Finanz-Commission) is composed of five deputies from the Senate, and five from the representatives of the citizens.

15. The Consistory Courts, (Consistorien). The Evangelical Lutheran Consistory consists of two deputies from the Senate, three clergymen, and one judicial Consistory counsellor. The Evangelical Reformed Consistory has two senators, two spiritual Consistory counsellors, and two lay assessors.

16. The Income Tax and Sinking Fund Commission, (Die Einkommensteuer und Schuldentilgungs-Commission). This consists of five

deputies from the Senate, and five from the representatives of the citizens. A section of this body, consisting of two senators and two representatives of the citizens, forms the Dwelling-house and Lodgings' Tax Commission, "Die Wohn und Miethsteuer Commission."

17. The Forest Office (Das Forst Amt) is conducted by two deputies from the Senate and one representative of the citizens, assisted by a forest conservator staff.

18. The Guilds Deputation (Die Innungs-Deputation) has the junior burgomaster as president, assisted by two members of the council of the third order.

19. The Catholic Church and School Commission (Die Katholissche Kirchen-und Schul-Commission) is under two members of the Senate, two ecclesiastics, and one layman.

20. The War Office (Das Kriegszeug Amt) is managed by three deputies from the Senate and one from the representatives of the citizens; over whom the senior burgomaster presides.

21. The Land Office (Das Land Amt). This is distinctive from the City (Justice) Land Office, attending to matters of government and finance of the eight villages dependant upon Frankfort, and overlooking the institutions relating to charities, trades, buildings, police, &c. It is managed by three deputies from the Senate and one representative of the citizens.

22. The Pawn Office (Das Pfand-Amt). Pawnbroking is a government affair in Frankfort, as in China, lending small or large sums upon suitable deposits. It is managed by three deputies from the Senate and two from the representatives of the citizens. No private pawnbroking establishment is permitted.

23. The Police Office (Das Polizei Amt). The junior burgomaster presides over this office, assisted by a senator of the second order and a counsellor of the third order. The staff of the office consists of an assessor, two actuaries, and two commissaries, &c. This office has an administrative and investigating competency; regulates the cleansing of the streets, fixes the price of every kind of food or necessaries of life, "Lebensbedürfnisse," and inspects the quality of the same in regard to health. For the protection of the living and of property, and for the prevention of disturbances endangering the public weal, there are 48 gens-d'armes, with six sub-officers and a superior officer; also 64 night watchers; and, for the outskirts of the town, 20 armed field-police, under two petty officers.

To the Police Office is joined the Fire Office. The fire-engine establishment is under the superior inspection of the junior burgomaster, who, immediately on a fire breaking out, orders the engines to the spot. The town is divided into 14 quarters, each of which has its engines, which quickly repair to the endangered neighbourhood on the alarm being given from the great watch-tower; and the city militia assemble for the preservation of order.

The Lock Hospital, as well as the Houses of Correction and Labour, are also under the inspection of the police. Since 1809 the Houses of Correction and Labour have been separated from the Orphan House.

For improving the moral and religious feelings of the inmates of these establishments, curates are appointed, and Sunday service is performed in one of the roomy wards; and beyond this, the prisoners can obtain religious books from a collection kept for their use.

The police have daily reports of all strangers who stop in the city made to it by the owners of houses where they take up their residence; the profession, name, rank, residence, &c. being given under severe penalties; and if they stay more than 24 hours, strangers must give up their passports and obtain written permission to remain. All servants, male or female, are obliged to take out books from the police, in which every particular connected with themselves is entered in different ruled columns; also name of master or mistress, date of employment, date of discharge, &c.; and a discharged servant is compelled, within 24 hours, to inform the police of the fact, and show his or her book, with the remarks upon it.

But the duties of the police extend to an infinity of other matters. The butchers, for instance, exercise their avocation each with a particular class of meat. He who sells beef does not sell mutton, and he who sells pork sells neither mutton nor beef. But, independently of these restrictions, each butcher can only sell a limited quantity of meat daily; and if he be so popular as to have a demand for more than his limited proportion, he must take it from some other butcher who has not yet sold his proportion; at least so I was told.

Women of the town are under the police. They are lodged in certain fixed localities, their numbers regulated, are subject to medical visitations; and when they travel, the poor creatures are obliged to record their profession in their passports in the coarsest terms. The number of illegitimate births will show that these restrictions have little effect upon morals.

Hackney carriages are under the police; and in each carriage is stuck the printed regulated rate of hire, the fare varying with the number of persons carried and the time occupied. The remuneration for the use of waggons, carts, trucks, porters, &c. is all fixed, contingent on weight and distance. Fire-wood is sold by the state, and the charge for its carriage is regulated by the distance it is taken. The men employed to saw the logs into lengths and split them are paid according to the number of lengths they saw; and in case the hatchet is used as well as the saw, in consequence of knots in the wood, the extra remuneration is fixed by the police.

The chimney-sweepers must inspect every chimney periodically, whether the owner of a house desire it or not, and the remuneration is fixed. In short, industry of all kinds, as well as all other matters, come under the cognizance of the police.

24. The United Excise and Exchequer Office (Das Vereinte-Rechenei und Renten-Amt) occupies the time of a numerous staff of accountants, under the direction of seven deputies from the Senate and four from the Representatives of the citizens. It looks to the accounts of the Mint, the land and river tolls, public stables, wood office, the purveyors, the carriers, city weighing department, the wharf cranes, the hay and goods weighing, the city gates accounts (weighing and passes, &c.), the bills of exchange and stamp office, the city salt magazine adminis-

tration, the sales by public outcry, the measurers, the exchange brokers and merchandise factors, the corn markets, the gauging institution on the Main, and finally, the malt and meal weighing.

25. The Health Office, or College of Medicine (Das Sanitäts Amt). Matters relating to the practice of medicine and to the public health in the city and dependencies are subject to magisterial control, under the presidency of the younger burgomaster, assisted by four consulting physicians. All the professors of the healing art are subject to this office, namely, 83 physicians, 11 apothecaries, 12 surgeons of the first and 10 of the second class, 7 dentists, 14 midwives in the city and 11 in the suburbs and villages, and 5 veterinary surgeons; so that there is about 1 medical man to every 500 souls; and as the annual average of births is 1187, each midwife averages 85 cases for the city and Sachsenhausen. There are 125 lawyers in the city, so that not only the bodies, but the goods, of the lieges must be well looked after.

26. The City Chamber (Die Stadt-Kammerei) is connected with the Exchequer and the Finances, and is under the direction of two deputies of the Senate and one representative of the citizens.

27. The City Lottery (Die Stadtlotterie) is managed by four senators and four representatives of the citizens. Raising money by lottery is in great favour with governments in Germany. There are two lotteries annually in Frankfort, and shares are obtainable down to the value of a few pence; so that the very mendicant can have a chance. Some of the projects of lotteries of the petty states or principalities would seem to be more ingenious than honest. A loan is raised in small shares (25 florins, for instance), to be paid off in a certain number of years, so much annually; but, instead of interest being annually paid upon each of these shares, the shareholders are entitled to the *chance* of a prize, a small portion of the interest that government *ought to pay* being distributed in small prizes. If the shareholder's number comes up without a prize attached to it, the money originally lent to government, possibly years before, is repaid *without interest;* if the number is drawn with a prize attached to it, the lucky holder may consider it a godsend. Original shares, or numbers remaining undrawn for successive years, advance in saleable value annually, from the greater chance of obtaining a prize. My German cook, who held one of these subscription shares of 25 florins undrawn for several years, could obtain in the money and share market 35 florins for it in 1844; these lottery shares being quoted in the Price Currents, and being negociable like other securities. I presume the Germans are peculiar in finding this lottery system attractive. To the credit of Frankfort, its lottery is not upon this principle.

28. The Foundations' Deputation (Die Stiftungs-Deputation). Charitable foundations are watched over by two deputies from the Senate.

29. The Enquiry Commission (Die Untersuchungs-Commission) looks to the claims and rights of citizenship, sojourners, &c., and is superintended by the junior burgomaster, assisted, if necessary, by two senators of the third bench.

30. The Tolls and Customs Administration (Die Zollverwaltung) is under a director, two counsellors, two secretaries and accountants

and other aids, together with an "association attorney." The Head Tax Office is under this department.

31. Office for Complaints in Toll and Customs matters (Die Zoll Untersuchungs-Behörde) is under a Toll Enquiry Judge and an actuary.

32. Senate's Miscellaneous Commissions (Besondere Senats-Commissionen) are charged with the correspondence with the ambassadors of the Confederation, on post-office affairs, the right of the city in respect to taking cognizance of post, and toll and customs matters, &c. &c.

33. Military Organization Department (Das Militärwesen).—The city has always had its military force, and traces of its existence are met with as far back as the year 1050. In 1463, it counted as many as 4000 well equipped citizens. After 1614, the town was divided into 15 quarters, which were reduced at a latter period to 14, each having its flag and company of men under a captain, lieutenant, and ensign, with a muster-master. Since 1657, in addition to the 14 companies of the quarters, there has been a body of citizen cavalry; about the same time the villages dependent on Frankfort had their militia, which was called out while the fairs were being held. In 1793, a body of volunteer sharp-shooters was formed, which still exists. In the present century a body of troops of the line was formed 500 strong. In 1812, when the city was given to the Fürst Primas, he abolished the quarter companies, and raised 4 battalions of National Guards, the fourth to have the express duty of attending at fires. The efficiency of these battalions was proved for five days during the retreat of the French from Germany.

Subsequently a reorganization of the citizens for the city defence, "Stadtwehr," took place, by enrolling all men under 60 years of age, and the military body now consists of a squadron of cavalry, a company of artillery, a battalion of sharp shooters, one of yagers, one of infantry, a fire battalion, and three other battalions of infantry, the first of which only is in uniform, and regularly armed; and two battalions of militia for the 8 dependent villages. All these are called Volunteers, although their service is compulsory, to distinguish them I suppose from the battalion of the line, which takes the daily duty of the city, the men of which are *enlisted*, and therefore genuine volunteers. This battalion of the line consists of more than 700 men, and is commanded by a lieutenant-colonel. A conscription law exists in Frankfort, but substitutes are permitted.

This concludes an enumeration of 33 public offices or departments, each with its functionary or functionaries, assistants, and dependents, for a population, including the 8 dependent villages, of 66,244 souls, all paid for of course by the inhabitants. How long such a division of labour, and multiplication of offices, would be suffered to exist, were there an annual publication of the city accounts, and an effective representation of the citizens, would scarcely be a debatable question.

The classes of inhabitants in Frankfort consists of citizens, sojourners, the so-called Jewish citizens, and people having (limited?) permission to domicile themselves. The first alone have the real rights of citizens. The other classes are under the protection of the law, and can legally exercise their profession while permitted to remain; but no

citizen rights are permitted to them, and as I was led to understand that the genius of the institutions of the city is opposed to the extension of the guilds and professions, and even to changes, except in filling up vacancies as they occur, there are small inducements to these classes to extend their numbers. The inhabitants of the 8 villages dependent upon the city are under its protection. (Staatsunter thanenverhältniss.)

The armorial bearings of the city (das Mappen der Stadt), were probably an imperial concession. They consist of a crowned white, or silver, spread eagle, on a red ground, the tongue and claws blue, and the feet golden. In the olden time, the arms were a black eagle.

Religious Constitution and Communities (*Kirchliche Verfassung*).

In 1533, after the Reformation, the celebration of all Catholic ceremonies, was interdicted in Frankfort, and it was prohibited to the people to hear mass, or to baptize their children in that faith. This interdict was afterwards removed. In 1633, the Catholic priests who refused homage to the Swedes were expelled; but by the treaty of Prague, in 1636, matters were restored to their former state, and since that period the Catholics have not been interfered with respecting their rites and ceremonies, and they are allowed to possess civil rights in common with the Lutheran citizens. As early as 1522, Lutheran doctrines found so many friends in Frankfort, that Hartmann Ibach was enabled to preach against celibacy in the church of St. Katherine. In 1524, many monks and nuns quitted their cloisters, and in 1525, the Lutherans had possession of the churches of St. Katherine, St. Bartholomew, and the "Three Kings," and some time after of St. Peters; and in 1530, the mass was abolished in the church of St. Nicholas. But the emperor interfering in 1548, the church of St. Bartholomew (which is the cathedral) was given back to the Catholics. Prior to 1806, the Lutherans were the paramount parties in political rights; but subsequently to the self-government of the city being restored, the three Christian communities—Lutheran, Calvinist, and Catholic—were put on an equal footing. During the persecution of Mary in England, Frankfort afforded an asylum to the expatriated; but most of whom returned to their fatherland on the accession of Elizabeth. Matters ran very high for a long time between the Lutherans and Calvinists; and up to 1785 the latter were obliged to celebrate their worship in the village of Bockenheim, outside the town. At this period the German and French Calvinists were permitted to build two chapels within the city, but they were not to have towers or clocks. Since that period, those who conform to the laws are not troubled about their religious belief; and all communities, whether Christian or not, are entitled to the protection of the State.

The Lutheran Community (Die Lutherische Gemeinde) have 12 clergymen, at the head of whom is a senior, constituting the church ministry. The Lutheran consistory is over this ministry, as church guardians. The senate confirms the choice of a preacher, on the proposition of the consistory and elders; either from the clergy belonging to the 8 villages, or from the candidates for the ministry, whose number

at present amounts to 19. The village parsons are likewise proposed by the consistory, and appointed by the Senate.

The Reformed Church (Die Reformirte Gemeinde) is the Calvinist or Presbyterian, and has 2 Presbyteries, 1 German and 1 French, each consisting of 2 preachers and 6 church elders. The preachers are paid by their several communities, and the State does not interfere in their choice.

The Catholic Community (Die Katholische Gemeinde) are under the diocese and bishopric of Limburg. The priests are accepted by the Senate, on the proposition of the Catholic Church and School Commission. Besides a city preacher, a canon of Limburg, and the bishop's commissary, the Catholic ecclesiastical body consists of 2 directors, a parish administrator, and 8 chaplains.

The Lutheran as well as the Catholic communities, have each their church representation, to protect the interests of the community in church business, and to administer the church property, &c. &c.

The treasurership of the Catholic Church, is managed by a section of the church representation.

The Mixed Church and School Commission, consists of 9 members from all Christian communities; namely, 6 deputies from the Senate, and 3 clerical councillors. A particular commission of the same is charged with the superintendence of the proclamation of mixed marriages. Frankfort pays annually 6000 florins to the Catholic bishop, and gives salaries also to the Lutheran and Catholic priests; but not to those of the Calvinist persuasion, who would not receive aid.

The Church and Burial Ground Commission, is charged with all matters relating to burials, vaults, graves, &c. The House of Peace (Friedhof), as the Germans poetically call the cemetery, is situated some distance outside the city. It is very prettily planted and laid out, and ornamented with numerous monuments, in very good taste. The enclosure is common to Christians of all sects. It is separated from the Jewish cemetery by a lofty wall. Sachsenhausen has its own small cemetery.

The Head Church-book Office (Die Haupt-Kirchenbuch Expedition) is charged with the registries of marriages, births, deaths, &c. &c.

The Frankfort Bible Society (Die Frankfurter Bibelgesellschaft) was established on the 1st January, 1816. The directors, consisting of 9 members, hold a meeting every 2 months.

The Frankfort Evangelical Missionary Association (Der Frankfurter Evangelische Missions-Verein) was formed in the 17th November, 1819, and is under 8 directors.

The Evangelical Association (Der Evangelische Verein), for furthering Christian knowledge, and Christian habits, was founded on the 6th October, 1837. For furthering business, there is a committee of 21 fellows, and a sub-committee of 5.

Another Evangelical Association was instituted on the 2nd May, 1842, for giving aid to the indigent of the Protestant community. Its business is conducted by a director and 9 members.

The Jews are divided into two sects, the Talmudists, and the Rationalists, and have necessarily two synagogues.

Institutions for the Poor.

The common poor box, or fund, (Der allgemeine Almosenkasten,) was founded in the year 1428 by John Weissbinder; 10 years later John von Holghausen added to the fund, and subsequently many others; and accessions fell to it from other sources. The Executive or Disbursement Committee distributed yearly in the 14 quarters of the city a great quantity of bread and wood, and the ready money given away is said to amount to 50,000 florins annually. This great outlay is supported by legacies, gifts, and by Sunday collections at the several Lutheran churches. Even with assistance from all the Christian churches, the funds are frequently insufficient to meet the claims, and the city chest is obliged to give its aid. Independently of the common poor box, each religious community has a box for its own poor.

The Orphan House, (Das Waisenhaus). The present large and simple, but dignified building, stands on the site of one erected in 1675. It receives the orphans, both male and female, of all the Christian communities. The bed wards run from end to end of the extensive frontage, and are well ventilated. On my visit there were not any bad smells, and everything looked clean and comfortable. To my surprise, each child's bed had a feather pillow. Meat is allowed only twice a week, and on other days soup and vegetables. A piece of rye bread constitutes a child's breakfast. The children in general did not look clear-skinned nor healthy; certainly not robust. The institution is supported partly by the State and partly by subscription, bequests, gifts, &c., particularly from an important accession from the deceased Philip Henry Flick. There are usually from 200 to 250 orphans in the house, boys and girls, who are instructed by resident teachers.

The Poor House (Das Versorgungshaus). Although the poor are generally looked after and their wants attended to in their dwellings, yet this capacious modern building was deemed necessary as auxiliary to the system, to aid houseless operative citizens or sojourners, or their wives, who are selected and recommended for residence by committees of the different communions. Most of the residents are above 60, and on my inspection of the institution in March last I found 72 males and 40 females located in the building. If husband and wife come in, they are not permitted to live together, although under the same roof. Work is supplied to the out-door poor in their several vocations who choose to come and labour in the work-room, and they are paid for their labour; others can come and learn a trade. I observed the men employed in shoe and basket and mat-making, wool and coffee picking and cleaning, &c. The old women were engaged in spinning, knitting, and sewing. Meat is given three times a week; soup and vegetables on the other days. Coffee for breakfast daily. The poor are located in small rooms, six or eight in a room. Not only were there feather beds, but numerous feather coverlets, like eider down quilts,—mostly, however, brought in by the poor themselves. The Catholics have a chapel to themselves in the house. The smells in the work-rooms were bad, but the dormitories were free from odour. It is assisted by the State, and by gifts and contributions; but is understood to be more wanting in funds than any other institution in Frankfort. In general the different religious communities look after their own poor, through the medium of committees.

The Destitute Females' Institution of St. Katherine's, and the White Ladies Convents (Die Weiblichen Versorgungs-Anstalten der St. Katharinen, und Weifsfrauen Klöster). These two former convents for unmarried females have merged into the Lutheran Charitable Institution for females, so that at present from the income of the first 24 women, and from the last 13 females, draw pensions. The choice of the widows and orphans is in the Senate, who usually lean to those whose husbands or parents have served the State.

The Aid Society of the Netherlands Community (Die Unter-Stussungsaustalt der Niederländeschen Gemeinde) was established in the 16th century by the Lutherans, who were driven from Antwerp on account of their religion, and found an asylum in Frankfort. The poor of this rich community are maintained out of a common purse, supplied by contributions of the wealthy. With the institution is joined a house for orphan boys, who get well educated.

The Aid Society of the Oberland Community, as distinguished from that of the Netherlands, was founded in 1754 by Lutherans, and in 1778 was recognized by the State. It is in imitation of the preceding.

Dr. Flick's foundation has several beneficent aims. It is committed to two administrators, the survivor of whom chooses an associate on the death of his fellow.

Besides the above, there are ten widows' and orphans' funds, namely, of the Civil Servants, of the Physicians, of the superior Officers of the Troops of the Line, of the Evangelical Lutheran Preachers, of the Village Pastors, of the regular Teachers of the Gymnasium, of the Model School, of the Common School, and of the regular teachers of the Catholic and of the Village Schools.

The Loan Fund (Die Hülfskasse) owes much to the large donations of the former Grand Duke. Its object is to assist honest citizens, who, in pursuit of their business, are in want of money.

A remarkable institution, called the "Cronstett und von Hynsperg'sche Damenstift," or Ladies Foundation, must not be omitted. It was founded by Justina Catherine von Cronstett, in 1753, for portionless single females of the noble houses of Alten-Limburg. She left her own princely mansion, with a frontage of from 15 to 21 windows on a floor (I do not recollect the exact number), towards the Rossmarkt, for the location of 12 single ladies of pious and pure life, who dine together, but have each two separate rooms, receive their friends, and remain in the house until they marry or die.

The Jews are not behind their Christian brethren in the number and efficiency of their charitable institutions and societies. Amongst these are a society for giving dowries to the daughters of Jewish citizens (so called), bequests for doing the same for two poor girls annually, society for distributing fire-wood to the poor, institution for poor single persons, for poor women lying in, and for many religious objects.

The exclusion of the Jews from the guilds at an early period induced that community to look to the means of furthering the condition of their craftsmen. Their emancipation during the reign of the Grand Duke led to the establishment of a society for this purpose; but this fell with their short lived freedom, on Frankfort being restored to its former political condition. From a society, however, for teaching handicrafts to the children of foreign Jews, arose the present flourishing Jewish Association,

supported by more than 500 subscribers, having the same object in view for the Jewish youth of the town, which, after 18 years' operation, has been attended with signal success, and its pupils are spread in the most distant regions. The success of this Association has led to the establishment of many others in Germany on the same model.

I may remark here, that one of the characteristics of Frankfort is the disposition of the people to form themselves into associations and societies for any and all objects—free-masons, merchants' associations, shooting societies, unions for reading, balls, music, &c. The best of these is the Casino, possessing excellent apartments, looking on the Rossmarkt. It consists of two classes—annual subscribers and a class of strangers, who are very liberally permitted to subscribe for three months; and fellows can introduce a stranger for a month without payment. It is abundantly supplied with periodicals and newspapers; has billiard tables, chess boards, card tables, &c.; and the fellows give several balls to the ladies in the year.

Several of the second rate hotels give balls (some of them masked) once or twice a week, chiefly on *Sundays*, and the admission is so low, that the lower classes can participate in them; much I should think to the risk of their own moral feelings, and certainly to the scandal of the town.

I wish I could state any thing specific respecting the finances of Frankfort; but considering that it calls itself a free city, that it has a semblance of a representative system in its administration, I must say that a secrecy is preserved with respect to the details, and even the amount of its income and expenditure, which is very discreditable to the governing body. The other free cities of Germany permit financial facts to appear in the Almanac de Gotha, and most of the despotic states of Germany have even less reserve in this important matter, particularly Prussia. It is said, that the financial accounts are always open to the inspection of the members of the representative body, but they do not promulgate details out of doors; and it was in vain I tried to obtain detailed information on the subject. A member of the lower house, a friend of my friend, at the request of the latter, inspected the books, and as far as his memory served him he communicated the result of his observation. The income of the city was about 1,280,000 florins, made up of about 80,000 income tax, 80,000 house tax, 70,000 octroi, 80,000 stamps, and 80,000 to 90,000 forests; and it has its share of the collections of the Zollverein, in proportion to the number of its inhabitants. The expenditure would appear to be a profound secret, for of that I could not obtain any account whatever. A German friend, to whom I applied, laughingly said it was a "mystery." The income tax is levied in a progressive per centage, according to the amount of income. Under 150 florins the tax is 15 kreutzers, or 5*d*. At 1000 florins, it is $\frac{1}{2}$ per cent.; at 4000 florins it is $\frac{8}{10}$ths per cent.; at 8000 florins it is $1\frac{8}{10}$ths per cent.; and all income above this sum pays 2 per cent.

In one matter Frankfort has a decided advantage over England, and that is in the cheapness of printing, and the consequent easy diffusion of information; and tradespeople have an incalculable advantage in the cheap facilities afforded to them for advertising their goods. The subscription to the "Intelligence Blatt," issued thrice a week, is 3

florins, or 5*s.* per annum, and 2*s.* 6*d.* for the half-year, paid in advance. For this trifling sum the subscriber has sometimes as much as 36 pages of letter press. The Government proclamations, official acts, proclamations of marriages, births, and deaths, are inserted weekly in this paper. Advertisements are inserted at 6 kreutzers, or 2*d* the line running across the whole width of the newspaper, and 1½*d.* for the half line.

In this place it will only be necessary to enumerate the various societies for different objects, as statistical details will be given of most of them. The Physical Society, the Medical Institute, the Natural History Society, the Natural History Museum, the Geographical Society, to which a statistical section is added, the College of Advocates, the Polytechnic Society, the Trades Association, the Institute for Garden and Field Culture, the Savings' Bank, the Institute for Improving the Condition of Servants, and for giving annual prizes to those who from length of service deserve them, and the Institute for the Blind.

The City Library is on a very good footing; comprising also some cabinet pictures and antiquities. There are also valuable private libraries, and reading societies. Frankfort has its journals and newspapers, the Frankfort Journal being in French.

With respect to Städel's Institute of the Fine Arts, comprising as it does a gallery of numerous pictures, some of them good, ancient and modern, it may be desirable to say a few words. It was founded in 1816 by a citizen of Frankfort, John Frederick Städel, whose object was not only the encouragement of the fine arts, but also that poor children of the citizens of Frankfort, without distinction of race or religion, should be *gratuitously* instructed in drawing, painting, copper-plate engraving, statuary, architecture, &c. The management of the institute and its funds are confided to five fellows; and, on a vacancy occurring, the others must elect a person to supply the place. The public are admitted daily to the collection of pictures, from 10 till 1; but to the library on Tuesdays and Thursdays only. Of the Flemish school there are paintings by Rubens, Ruysdael, Berghem, Wouvermans, Weenix, Hobbema, the two Vander Veldes, Ostade, the two Teniers, &c. Of the old Dutch school paintings by Schoreel, Granach, Quentin Matsys, van Eyk, Holbein, Durer, &c. Of Frankfort painters, works by Elsheimer, Lingelbach, Steenwick, Roos, Schuts, &c. Of modern painters some are very large, and a few of them are very good. Lessing's "Huss before the Council" is excellent. There are also some landscapes of his pretty good. Overbech's "Triumph of Religion" is good; also Rethel's "Daniel in the Lions' Den." A few of the Italian school are scarcely worth notice. There are also some antiquities.

The meteorology of a country so much influences its vital statistics, that it will be necessary to say a few words on the subject. The following means, maxima, and minima monthly, for the period between the years 1827 to 1838, at Frankfort, are from observations by Von Kreigf, the 10 P.M. observations being only from 1827 to 1835.

TABLE I.

Months.	9 A.M.			12 o'Clock.			3 P.M.			10 P.M.			Monthly Mean Temperature.
	Mean.	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	
	Deg. Faht.	Deg. Faht.	Deg. Faht.	Deg. Faht.	Deg. Faht.	Deg. Faht.	Deg. Faht.	Deg. Faht.	Deg. Faht.	Deg. Faht.	Deg. Faht.	Deg. Faht.	Deg. Faht.
January . .	28·2	54·0 24/1834	−8·0 30/1830	32·0	55·8 31/1830	−3·8 31/1830	31·8	57·0 24/1834	−3·8 31/1830	28·6	54·9 24/1834	−10·7 31/1830	30·15
February . .	32·0	52·9 10/1833	−10·7 2/1830	36·7	57·4 11/1833	−1·5 1/1830	37·2	58·5 11/1833	−3·1 1/1830	32·0	51·8 27/1834	−10·7 18/1827	34·5
March . . .	41·4	57·9 22/1826	24·6 7/1828	46·4	65·7 21/1836	27·5 9/1833	46·3	72·7 31/1830	27·1 9/1833	40·1	59·4 31/1830	22·6 7/1828	43·5
April . . .	49·7	71·8 11/1827	27·9 9/1837	57·6	75·9 30/1827	38·3 21/1834	56·5	81·5 30/1827	29·8 9/1837	47·1	64·8 28/1830	27·5 9/1837	52·7
May . . .	59·7	82·2 21/1827	44·2 10/1838	66·4	85·5 22/1827	44·8 14/1832	66·7	96·8 31/1827	41·9 10/1837	56·1	75·9 31/1827	37·2 14/1832	62·2
June . . .	66·0	81·5 27/1827	47·8 9/1838	71·8	89·4 26/1830	55·6 6/1829	72·5	96·8 19/1827	51·1 8/1838	62·1	75·9 14/1827	43·2 8/1838	68·1
July . . .	68·7	84·0 5/1828	54·5 27/1838	75·4	91·2 30/1830	48·9 19/1832	76·1	95·7 4/1828	57·2 25/1838	65·1	80·6 4/1828	50·0 19/1832	71·6
August . . .	65·3	82·8 3/1827	52·2 30/1832	71·1	89·8 3/1827	54·5 30/1832	72·5	91·6 3/1827	55·2 27/1832	62·8	81·0 3/1827	51·1 29/1832	87·9
September . .	58·3	74·7 1/1831	52·2 30/1827	64·4	79·5 11/1827	52·2 30/1831	65·3	85·5 18/1827	50·9 13/1836	56·5	68·0 4/1836	45·0 20/1827	61·1
October . . .	49·3	63·5 1/1828	30·9 31/1836	54·3	68·0 3/1831	39·4 30/1828	55·6	72·5 8/1836	34·2 31/1836	48·9	63·5 1/1831	32·2 29/1828	52·0
November . .	38·3	57·9 7/1831	5·0 15/1835	41·7	60·1 2/1830	5·1 14/1835	42·1	60·1 7/1834	20·8 14/1835	38·7	60·1 7/1830	14·0 14/1835	40·2
December . .	34·5	54·0 28/1833	2·7 31/1829	37·4	55·5 22/1828	8·2 28/1829	37·6	55·6 16/1827	8·4 28–1829	34·9	34·7 9/1833	3·2 2/1829	36·1
Total Year	49·3			54·6			55·9			47·7			51·6

The latitude of Frankfort is 50° 6′ N. and the longitude 8° 36′ E. of Greenwich Observatory. The latitude of London is 51° 31′ N. and the longitude 0° 5′ 48″ W. of Greenwich. The mean temperature of Frankfort for the year, it will be seen, is 51° 6′ of Fahrenheit, while that of London, deduced from 20 years' observations by Mr. Howard, is 50° 5′. This difference of mean temperature might be looked for from the difference of latitude; but Frankfort has an infinitely greater range of the thermometer than London, the cold of winter being much more severe, and the heats of summer much more oppressive. The mean temperature of January in London is 36° 34′, while for 11 years in Frankfort it is 30° 15′. In December, London is 38° 71′, while Frankfort is 36° 1′. The hottest month in both cities is July; but in London the mean temperature is 62° 97′, while in Frankfort it is 71° 6′; and by Mr. Kreigf's table it appears that at 12 o'clock, in 1830, the thermometer rose to 91° 2′; at 3 P.M. 95° 7′ in 1828; and in June, 1828, at 3 P.M., 96° 8′; and at 10 P.M., in 1832, in July, the *minimum* heat was 50°. On the other hand, the cold at Frankfort is extreme at times. The minimum in January, 1830, at 9 A.M., was 40° below the freezing point; and at 10 P.M., in 1830, even 42° 7′ below the freezing point. Under these circumstances, as might be expected, the annual range of the thermometer is very considerable; and Von Kreigf states that in the year 1827 it ranged from 28° 8′ plus to 22° minus, or 50° 8′; that is to say, from 96° 8′ Fahrenheit to 49° 5′ below the freezing point—a range of 114° 3′ of Fahrenheit. This must necessarily be very trying to constitutions not robust.

The monthly increment and decrement of temperature following the sun's course, will consequently not be found to correspond in Frankfort and London. In the former, the monthly differences are, January being the coldest month,

Frankfort . .	Jan. to Feb. 4·35° +	March, 9·0° +	April, 9·2° +	May, 9·5° +	June, 5·9° +	July, 3·5° +	
London . . .	Jan. to Feb. 3·26° +	March, 2·41° +	April, 5·60° +	May, 7·79° +	June, 3·96° +	July, 3·61° +	
Frankfort . .	Aug. 3·7° —	Sept. 6·8° —	Oct. 9·1° —	Nov. 11·8° —	Dec. 4·1° —	Jan. 5·85° —	
London . . .	Aug. 0·7° —	Sept. 5·2° —	Oct. 6·91° —	Nov. 8·3° —	Dec. 3·69° —	Jan. 2·37° —	

The chief features here are the rapid increase of temperature at Frankfort, at the rate of 9° monthly, to June; while in London the temperature increases gradually, the greatest monthly differences being less than 8° in May. In Frankfort there is a fall of 3° 7′ in August, while in London, July and August scarcely differ in temperature. Another feature of Frankfort is the great fall, of nearly 12°, in November, while in London it is not more than 8° 3′. The fall also from December to January, in Frankfort, is 5° 85′, while in London it is only 2° 37′.

The next great meteorological fact bearing upon health, probably the most important of all, is the moisture of the air and its changes. The average annual fall of rain in London is about 24 inches; but the fall of rain does not indicate the average moisture of the air, which can only be shown by the dew point. This is not given by Kreigf; and although given for two years by Schmidt, yet I cannot profit by it, as I know not what instrument or what scale is used. I would presume, however, that the climate of Frankfort is comparatively dry.

Frankfort has experienced numerous shocks of earthquakes, and a list of the occasions is given by Kreigf, commencing with A.D. 872 and

ending with A.D. 1728. Their number is 23; and that of 1728 was so severe, that it moved furniture, and shook open closed (locked) doors.

TABLE II.—*Meteorological Characteristics at Frankfort during the Years* 1839 *and* 1840, *from Papers communicated to the Geographical Society by L. M. Schmidt,*

—	Fog.		Rain.		Snow.		Hail.	Tempests, Thunder, and Lightning.	Dew Point Lines.
	No. of Times.	Total Duration in Days.	No. of Times.	Total Duration in Days.	No. of Times.	Total Duration in Days.	No. of Times.		
1839									
January	2	1½	11	4¼	13	4	1, *1	..	22·05°
February	5	3½	15	5¼	8	2¼	*1, 1	..	45·30
March	1	0½	16	4	5	2	1	..	29·10
April	..	..	17	2¾	3	1¼	..	..	15·60
May	2	2	15	3½	..	..	..	5	21·75
June	1	0¼	21	3¼	..	..	..	5	20·70
July	2	0½	20	2	..	..	..	9	14·40
August	2	0¼	22	3½	..	..	..	3	34·50
September	8	2	27	6	..	..	..	4	29·10
October	6	1½	14	3¼	2	0½	..	..	22·95
November	3	2	17	4½	2	0¼	..	..	15·00
December	6	2½	26	5¼	3	1¾	1, *1	..	46·35
Total Year	38	16½	221	48	36	12	7	26	26·48 mean.
1840									
January	7	1¾	17	4¾	4	1	*4	2	27·75
February	6	1½	12	2½	4	0½	*1	..	13·95
March	1	0½	6	1¼	13	3½	*1	..	10·65
April	..	..	7	0¾	..	..	..	..	1·95
May	1	0½	22	5	..	..	1	2	14·10
June	..	..	21	4½	..	..	1	5	26·25
July	4	0½	18	3½	..	..	..	5	25·20
August	1	0¼	15	2½	..	..	..	2	10·05
September	2	0½	26	5	..	..	..	1	28·80
October	4	1¼	25	4¾	..	..	*1	..	21·00
November	3	0½	28	8¾	2	0¼	*1	2	51·15
December	4	1¾	3	0¾	3	0¾	..	..	7·50
Total Year	33	9	200	44	26	6	10	19	19·10 mean.

* Sleet.

It would appear from the above table that there were 38 times fog in 1839, equal to a duration of 16½ days; quite equal to, if not exceeding, anything we have in London. In 1840 fog occurred 33 times, but equal only to a duration of 9 days. April would appear to be free from them, and they are less constant in *November* than in the winter months. Rain occurred 221 times in 1839, and 200 times in 1841; the duration in the former year being equal to 48 days, and in the latter to 44; and

the fall was not widely different in the respective months of the 2 years. It snowed 36 times in 1839, and 26 times in 1840; the duration of the first, however, being equal to 12 and of the last to 6 entire days. As might be expected, the thunder-storms are most rife in the hot months, and they are somewhat numerous particularly in July. Of the dew point I cannot say anything, as I do not know what instrument or what scale is used, but the *mean* indications are in inches and lines.

TABLE III.—*Prevailing Winds at Frankfort during the Years* 1839 *and* 1840, *communicated to the Geographical Society by L. M. Schmidt.*

1839								
—	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
	No. of Days.	No. of Days.	No. of Days.	No. of Days.	No. of Days.	No. of Days.	No. of Days.	No. of Days.
January	1½	2	3	0½	0½	14½	6	3
February	..	2½	1½	2½	..	13	4½	4
March	0½	9	7½	2	1	8	2½	0½
April	3½	13	1½	1	0½	3½	2½	4½
May	4	7½	4	5½	..	2	2	5½
June	1	5½	4	3	2	7	6	1½
July	1	3	0½	1½	0½	16½	4½	3½
August	5½	4½	1½	2	2½	10½	1	3½
September	..	1	3½	2½	3½	11	6½	2
October	1	16	4½	4	1½	2	1	1
November	2	5	2	7	1	5½	2½	5
December	1	4	3½	3½	1	9½	3	5½
Total Year	21	73	37½	35	14	103	42	39½
1840								
January	1	9	2½	..	0½	17	1	..
February	1	9½	6½	2	2	6	2	..
March	2	11½	3½	..	..	6	4½	3½
April	2½	11½	11	..	..	2	1½	1½
May	0½	2½	5½	0½	0½	10	8½	3
June	..	2½	1½	..	0½	13½	8½	3½
July	2½	0½	0½	0½	0½	16½	6	4
August	4	8½	4½	..	1	10	1½	1½
September	1½	2	2	1	5	12	4	2½
October	1½	6	1½	1½	2½	10½	5	2½
November	1½	6½	2½	1	1½	16	1	..
December	2	16	7	1½	..	4½	..	..
Total Year	21	86	48½	8	14	124	43½	21

In Frankfort, as in London, the chief winds are principally from the westerly points, and singularly so from the south-west. It will be observed that there is considerable uniformity in the winds in the respective months of the 2 years, 21 days in both years from the north and 14 days in both years from the south; and from the west, in 1839, it was 42 days, and in 1840 it was 43½. This uniformity is curious. Mr. Schmidt gives the intensity of the wind for each month, and it is found as the south-west is the most prevailing wind, so is its intensity the greatest. The next in intensity are the north and north-east.

TABLE IV.—*Population of Frankfort, together with Sachsenhausen and the dependent Villages of the State of Frankfort, according to the Census taken in December*, 1840; *from a Paper by Von Dreitzigacker and L. M. Schmidt, published in the Third Number of the Physico-Geographical Society's proceedings at Frankfort*, 1841.

—	Number of Families.	Average souls to a Family.	Men and Boys above 14 Years of Age.	Women & Girls above 14 Years of Age.	Children under 14 Years of Age.		Total Inhabitants.		Total Males and Females.
					Males.	Females.	Males.	Females	
Frankfort and Sachsenhausen, with their garden houses	7,426	7·66	23,475	23,013	5,218	5,233	28,693	28,246	56,939
1. Village of Bornheim	530	5·46	1,049	1,044	387	418	1,436	1,462	2,898
2. ,, Oberrad	379	5·43	689	760	300	311	989	1,071	2,060
3. ,, Niederrad	286	5·60	518	590	229	267	747	857	1,604
4. ,, Hausen	101	5·36	199	192	84	67	283	259	542
5. ,, Niedeiursel	86	5·14	159	158	69	56	228	214	442
6. ,, Bonames	86	5·55	244	188	68	78	312	266	578
7. ,, Niedererlenbach	132	5·44	270	240	101	107	371	347	718
8. ,, Dortelweil	100	4·63	157	188	59	59	216	247	463
Total	9,126	..	26,760	26,373	6,515	6,596	33,275	32,969	66,244

The number includes strangers who have lived a year in the several localities.

Population.

The city of Frankfort occupies 625 acres (Morgen), and its lands comprise 10,777 acres. Sachsenhausen stands on 54 acres, and its lands comprise 4,335 acres. The forests of Frankfort contain 15,060 acres; the total area, therefore, contains 30,851 acres: the 8 villages cover 17,619 acres. The population of Frankfort and its dependencies is composed of citizens, sojourners, and strangers, comprised in several Christian sects, and two divisions of the Jews. I tried in vain to obtain the details of the numbers distributed under their religious beliefs, and equally failed in determining the numbers under the various occupations. It is understood that amongst the Christians the Lutherans greatly prevail; they having 7 churches and 3 chapels for divine worship; the Catholics have 3, and are said to number about 7000 souls; and the Calvinists 2 places of worship for 2000 souls. The Herrnhutters have a meeting-house, and the Jews 2 synagogues. I understood that the Jews numbered more than 7000 souls. These several numbers would leave above 40,000 Lutherans. Disabled from obtaining the details of the census of 1840, I went over the Directory, and picked out the following numbers of persons engaged in the chief occupations:—

Advocates, LL.D.	Physicians, including Surgeons and Accoucheurs.	Apothecaries.	Bakers.	Brewers.	Beef Butchers.	Veal Butchers.	Pork Butchers.	Mutton Butchers.	Innkeepers and Inns.	Shoemakers.	Men's Tailors.	Ladies Tailors (also Men.)	Teachers of Music, not including Orchestras.	Letters of Carriages.
96	69	10	44	109	66	25	29	16	58	205	175	64	52	27

These figures exhibit curious features. The lawyers more than double the number of bakers, and nearly equal the combined numbers of the bakers and beef butchers. Law would seem, therefore, to be as much a pabulum for the Frankforters as bread and beef; but the brewers slightly exceed the lawyers: the consumption of beer and law, therefore, runs almost neck and neck. The people support more dispensers of physic in their various grades than bakers or beef butchers. But if numbers supported in each trade be indicative of a predilection of a people, then the passion of the Frankforters is for dress; for the shoemakers, and men's and women's tailors, (the latter being males,) put the combined numbers of lawyers, doctors, brewers, and butchers of all classes—beef, pork, mutton, and veal—out of the category; and I must admit there is some semblance of truth in this, for the Frankforters are a well-dressed people.

There are about 4000 houses in Frankfort, averaging 14 souls to a house, and 12 in Sachsenhausen. But the city is divided into 14 quarters, and the proportion to a house varies from 20 in letter B and letter E to 11·1 in letters K and M. This large average to a house, exhibiting so marked a contrast to England is to be attributed to the magnitude of the houses, and does not occasion crowding. In the respectable and most aristocratic parish in London (Marylebone), the houses average only 9·7 inhabitants; Westminster, only 8·8; and all Middlesex only 7·6. Edinburgh, which I thought, might afford a fair contrast with Frankfort, contains without Leith only 6·5 to a house; Glasgow not so many; and the city of Perth, the extraordinary number of only 3·8 to a house; York city 5; Manchester not quite 6 to a house, and Liverpool 6·9. The feature, therefore, noticed in Frankfort is quite characteristic. The ventilation and drainage in most parts are bad, and the cesspools in most of the houses, even of the palatial character, are intolerable nuisances. The lighting and paving of the city are quite unworthy of it. There are not any foot pavements, and a miserable oil lamp is slung across the street at long intervals, making darkness visible.

It will be remarked that one unusual feature in the population is the equality of the sexes, even at those ages where in most countries females predominate: the males above 14 years of age amount to 23,475, and the females to 23,013, and this character predominates throughout the villages, with the exception of Oberrad, Neiderrad, and Dortelweil; and the final results exhibit the same features, namely, 26,760 males, and 26,373 females above 14 years of age. The sexes under 14 years of age exhibit a contrary feature, and opposed to the usual proportions; the male children amount to 6,515, while the female amount to 6,596. The Fourth Report of the Registrar-General states that 10,846 males are born to every 10,000 females in England; and between the age of 15 and 20 in the Fifth Report, it is calculated that there will be living only 782,425 males to 805,915 females, and the excess of females increases after this period; below 15, the excess is in favour of males. I am not aware of any local cause for this deviation from a general law at Frankfort.

Another unusual feature in the social condition of Frankfort, is the large number of persons constituting a family in Frankfort and Sachsenhausen, amounting to 7·66. If we look to the 7 out of the 8 dependent villages, the variation is only from 5·14 to 5·60. In the village of Dortelweil alone, 4·63 persons constitute a family. If we consider

the average to a house of 3·8 persons in Perth as indicative of each house being occupied by a family; the disproportion between the Frankfort average and this is remarkable.

Another feature in the Frankfort population is its probably stationary character for at least 120 years, judging from the marriages, births, and deaths noticed elsewhere, and this might be accounted for by the stringent character of its municipal institutions, which only permit vacancies to be filled up in the guilds; and persons seeking work or service, to remain in the city only three days, unless they find employment. The free city would thus appear to be little influenced by the progressive spirit of the age.

TABLE V.—*Marriages Yearly in Frankfort and Sachsenhausen, according to the Station of the Parties.*

——	1833	1834	1835	1836	1837	1838	1839	1840	1841	1842	1843	Total for 10 Years.	Annual Averages.
Citizens with citizens .	109	83	108	94	103	97	116	109	96	87	98	991	$99\frac{1}{10}$
Citizens with residents, not citizens . . .	113	9	10	15	15	5	10	22	14	14	12	126	$12\frac{6}{10}$
Citizens with strangers	*	155	138	140	136	157	179	149	135	133	121	1,443	$144\frac{3}{10}$
Residents with residents, both not citizens .	14	2	2	1	1	1	..	..	2	1	1	11	$1\frac{1}{10}$
Residents with strangers	†	5	11	10	17	16	13	7	6	7	8	100	10
Strangers with strangers	†	14	5	7	8	12	13	7	11	11	5	93	$9\frac{3}{10}$
Belonging to the Jewish community . . .	16	35	24	28	26	23	11	31	12	18	22	230	23
Total Pairs .	252	303	298	295	306	311	342	325	276	271	267	2,994	$299\frac{4}{10}$

* Included in the above. † Included in the last.

Marriages, Births, and Deaths.*

It will be observed that in 11 years the births in Frankfort and Sachsenhausen amounted to 13,058, and the deaths to 12,864, making a difference only in favour of the births of 194. Now, as the guilds and trades have not increased from without, and as strangers seeking employment can only remain (unless employed) a limited period in the city, there is reason to believe that the population has remained nearly, if not altogether stationary, for many years back. Indications of this are furnished in the marriages, births, and deaths for periods going back for more than a century in Frankfort and Sachsenhausen.

——	Marriages.	Births.	Deaths.
1720 . . .	191	935	1,241
1746 . . .	262	1,081	1,345
1749 . . .	232	1,013	1,345
1794 . . .	288	823	1,497
1840 . . .	294	1,145	1,062

* Table VI., see page 342.

TABLE VI.—*Monthly Return of Marriages, Births, and Deaths in Frankfort and Sachsenhausen, during Eleven Years.*

	1833			1834			1835			1836			1837			1838			1839		
	Marriages.	Births.	Deaths.	Marriages.	Births.	Deaths.	Marriages.	Births.	Deaths.	Marriages.	Births.	Deaths.	Marriages.	Births.	Deaths.	Marriages.	Births.	Deaths.	Marriages	Births.	Deaths.
January .	19	83	102	10	81	95	17	112	90	16	102	134	28	78	100	15	95	102	20	94	128
February .	16	59	80	21	89	99	11	110	94	24	95	136	17	109	162	16	114	82	30	113	101
March .	32	72	89	18	120	112	24	108	96	23	108	133	16	95	144	24	117	102	20	110	129
April . .	11	88	123	31	93	137	26	106	98	20	94	122	30	119	164	26	106	107	29	115	129
May . .	28	95	123	29	116	111	26	76	87	34	98	123	34	100	103	35	98	121	38	104	90
June . .	22	84	137	24	97	82	22	91	94	18	101	108	24	93	84	23	82	93	26	109	83
July . .	27	96	100	30	97	93	21	100	72	29	95	75	26	84	92	31	105	83	37	93	79
August .	20	101	99	20	95	106	40	91	89	30	89	85	30	89	84	36	103	91	37	97	93
September	21	76	102	24	95	105	28	95	89	25	110	72	28	106	69	25	95	99	30	96	86
October .	30	81	94	38	85	96	38	95	59	31	96	78	31	104	71	38	105	108	30	92	87
November	17	79	88	33	97	96	25	92	80	25	97	91	24	77	85	20	80	90	19	91	81
December	9	86	93	25	98	95	20	91	89	20	81	91	18	84	86	22	76	100	26	95	111
Total .	252	*1,000	1,230	303	1,163	1,227	298	1,167	1,037	295	1,166	1,248	306	1,138	1,244	311	1,176	1,178	342	1,209	1,197

	1840			1841			1842			1843			Total for 11 Years.			Monthly Average for 11 Years.			Quarterly.		
January .	16	96	86	21	123	106	18	104	105	10	128	94	190	1,096	1,142	$17\frac{3}{11}$	$99\frac{1}{11}$	$103\frac{9}{11}$	$20\frac{1}{11}$	$101\frac{9}{11}$	$109\frac{9}{11}$
February .	24	87	98	20	99	93	16	116	100	25	120	89	220	1,111	1,134	20	101	$112\frac{2}{11}$			
March .	32	98	103	25	119	126	25	99	86	15	102	130	254	1,148	1,250	$23\frac{1}{11}$	$104\frac{4}{11}$	$113\frac{1}{11}$			
April . .	29	108	116	14	111	134	16	97	87	20	99	109	252	1,136	1,326	$22\frac{10}{11}$	$103\frac{1}{11}$	$120\frac{6}{11}$			
May . .	28	104	105	26	108	103	35	108	105	22	104	97	335	1,111	1,168	$30\frac{5}{11}$	101	$106\frac{2}{11}$	$25\frac{7}{11}$	$101\frac{2}{11}$	$106\frac{1}{11}$
June . .	28	111	84	21	119	80	20	118	96	30	90	78	258	1,095	1,019	$23\frac{3}{11}$	$96\frac{6}{11}$	$91\frac{1}{11}$			
July . .	11	101	73	19	114	104	38	117	80	34	102	64	323	1,104	915	$29\frac{4}{11}$	$100\frac{4}{11}$	$86\frac{9}{11}$			
August .	38	114	83	23	89	91	21	99	97	27	116	83	322	1,083	1,001	$29\frac{3}{11}$	$98\frac{5}{11}$	91	$30\frac{6}{11}$	$99\frac{5}{11}$	$88\frac{6}{11}$
September	23	106	70	28	90	83	21	120	98	20	105	92	273	1,094	965	23	$99\frac{5}{11}$	$87\frac{8}{11}$			
October .	29	108	80	28	96	133	25	113	96	30	84	92	348	1,059	994	$31\frac{1}{11}$	$96\frac{3}{11}$	$90\frac{4}{11}$			
November	17	95	82	28	92	70	16	100	95	14	93	83	238	993	941	$21\frac{1}{11}$	$90\frac{3}{11}$	$85\frac{6}{11}$	$24\frac{9}{11}$	$93\frac{1}{11}$	$89\frac{2}{11}$
December	30	99	82	23	106	95	20	100	82	20	112	85	233	1,028	1,009	$21\frac{2}{11}$	$93\frac{1}{11}$	$91\frac{8}{11}$			
Total .	325	1,227	1,062	276	1,266	1,211	271	1,291	1,127	267	1,255	1,096	3,246	13,058	12,864	$295\frac{1}{11}$	$1,187\frac{1}{11}$	$1,169\frac{5}{11}$			

* Not including 62 born dead.

Now, the approximations in these numbers with those in the years from 1720 to 1840, seem to indicate that the restrictive policy is of ancient date, and that no great fluctuations have taken place in the population of the city. The population, by the census of December, 1840, was 66,244, including the 8 villages. In 1837, it was stated to be 63,936, but I know not on what authority this rests, and I shall use, therefore, the number in the city and Sachsenhausen 56,739, of the census of 1840 for determining per centages.

In marking the effect of seasons upon marriages, births, and deaths quarterly, the Registrar-General makes winter end 31st March; spring, 30th June; summer, 30th September; and autumn, 31st December: this does not accord with the curve of temperature, the greatest quarterly cold being in the months of December, January, and February, and not in January, February, and March. The effect of a natural law may be thus masked. He obtains the following results:—

	Autumn.	Spring.	Summer.	Winter
Marriages . .	36,306	31,355	29,634	25,482
	Winter.	Spring.	Autumn.	Summer.
Births . . .	131,257	129,677	121,058	120,356
	Winter.	Spring.	Autumn.	Summer.
Deaths . . .	97,765	89,141	83,639	75,707

According to the Registrar-General's division of the year the temperature for the quarter is

	Winter.	Autumn.	Spring.	Summer.
Faht.	40·2	45·8	54·8	61·1

but if the Registrar-General had adopted the ordinary division of the year, the winter months, consisting of December, January, and February, he would have found that the deaths exactly followed the curve of temperature; and that instead of autumn being the next coldest quarter to winter, spring really is:—

	Winter.	Spring.	Autumn.	Summer.
Mean of 10 Years Faht.	39·9	48·1	51·4	63·6

The Frankfort Returns for 11 years give the following:—

	Summer.	Spring.	Autumn.	Winter.
Marriages . .	$30\frac{6}{11}$	$25\frac{7}{11}$	$24\frac{9}{11}$	$20\frac{1}{11}$
	Winter.	Spring.	Summer.	Autumn.
Births . . .	$101\frac{7}{11}$	$101\frac{3}{11}$	$99\frac{5}{11}$	$93\frac{1}{11}$
	Winter.	Spring.	Autumn.	Summer.
Deaths . . .	$109\frac{9}{11}$	$106\frac{1}{11}$	$89\frac{3}{11}$	$88\frac{6}{11}$

The greatest number of marriages occur at Frankfort in summer; in England, in autumn: the least number in winter in both. The curve of deaths is absolutely the same in Frankfort and England. The same is the case with the births, with the exception of the inversion of summer and autumn, instead of autumn and summer. These coincidences are of considerable interest, as strengthening the inference that the seasons influence even social as well as physical events. The greatest number of marriages take place in England in autumn, and according to the natural course of events, the greatest number of births should occur in summer. This is not the case; winter exhibiting the maximum number. In this respect, Frankfort more closely follows the natural law than England. The greatest number of marriages occur in summer, and naturally the greatest number of births occur in winter and spring.

An inspection of the table will show what slight fluctuations there have been in 10 years. In 1833, the marriages were 252; in 1843, only

267. The births were 1,163 in 1834, and 10 years afterwards 1,255. The deaths in 1833 were 1,230, and 10 years afterwards 1,127. One feature in the monthly deaths is decidedly marked, that the average maximum of deaths for 11 years is in the month of April, as if the feeble had just been able to struggle through the intense cold of a German winter, but too much overpowered to rally. The average annual number of marriages for 10 years is $299\frac{4}{10}$; and as the population in the census for 1840 was 56,939, this gives only 1 marriage annually to 190 souls. In Great Britain, for 1841, the marriages were 1 in 130; the mean of 3 years, 1 in 128. In London, the marriages are usually 1 annually in a fraction more than 100 persons. In 5 of the principal Scotch towns, the very lowest proportion of annual marriages was in Perth, being 1 in 159, while Dundee had 1 in 111; Aberdeen, 1 in 140; Glasgow, 1 in 120; and Edinburgh, 1 in 131. The remarkable paucity of annual marriages, therefore, in Frankfort cannot be attributed to natural causes. but to that baneful restrictive policy, which interferes with the laws of nature, and is the parent of moral evils. Parties are not permitted to marry in Frankfort by the municipal laws, unless they have a certain tangible capital to commence life with, (I believe 600 florins,) and the consequences of this interference I shall proceed to exhibit.

*Births.**

The average annual births for 10 years in Frankfort and Sachsenhausen is 1205·8, namely, 617·1 males and 588·7 females. The births, therefore, are only 1 in 47·2 of the population, or 2·1 per cent.; while the proportion for England is 1 in 31 of the population, or 3·197 per cent. In France it is 1 in 33, or 3·403 per cent. The restrictions on marriage are manifest in this result; but even of this number so many are illegitimate, that the restrictions are not less prejudicial to the progress of population than to morals. The proportion of births of male to female children is 20·6 to 19·6, or 1·08 per cent. to 1·03 per cent. In England it is 10,486 to 10,000, or nearly 20·9 to 20; in France 21·3 to 20. The *Annuaire* for 1842 says 17 to 16. The birth of males to whole males is 1 in 46·4, or 2·12 per cent., and female children to total females 1 in 47·9, or 2·08 per cent.

Coming now to the consideration of illegitimate births, we find that on an average of 10 years Frankfort gives annually 74·4 boys and 74·0 girls, and for Sachsenhausen 25·3 boys and 21·2 girls, making an annual average of 99·7 boys and 95·2 girls, and a total average annually of illegitimate children of 194·9, independently of the still-born children, whose legitimacy or illegitimacy is not specified. Every 6·18 child born, therefore, or 16·16 per cent. of the whole births, is a bastard!

This melancholy result of moral feeling, unexampled in England and France (for in the former country only 1 in 16, or 6·25 per cent., and in the latter 1 in 13, or 7·69 per cent. is illegitimate), may fairly be attributed to the municipal restrictions on marriage; and if we look to the loss of children under 5 years of age, amounting annually to nearly 32 per cent. for boys and $29\frac{1}{4}$ per cent. for girls of the whole deaths, the mind is unavoidably led to connect this great loss with the disproportionate number of illegitimate births. An onerous responsibility, therefore, may rest upon those who cause this amount of deviation from moral rectitude, and also a responsibility for the possibly fearful consequences

* Table VII., see page 346.

of the deviation. The object of the restrictions on marriage is, no doubt, to guard against a pauper population; but an evil affecting the pocket must be light in comparison with the moral consequences resulting to society from pernicious efforts to guard against it.

Some discussion has taken place both in France and England whether legitimacy or illegitimacy of birth has, or has not, any effect upon the relative proportions of the sexes. The French think that the proportions born in or out of wedlock are different. In wedlock there are 16 boys to 15·023 girls, but out of wedlock the proportions are 24 boys to 23·019 girls; which gives a less preponderance to male births. The Registrar-General in England, in his Report of the 14th August, 1843, says the English returns give a result exactly the reverse of this; the legitimate boys being as 105·4 to 100 girls, while the illegitimate are as 108 to 100. The Frankfort returns support the French view, the legitimate births exhibiting the males to the females in the proportion of nearly 74 to 70½, while the illegitimate births are only as 99·7 to 95·2. Indeed in Frankfort city the male and female illegitimate births are nearly equal.

The total average annual number of still-born children is 66·1, namely, 37·3 males and 28 8 females in proportion to the whole births, being 1 in 18·2 births, or 5·4 per cent.; the males 1 in 16·5, or 6 per cent. of male births, and females 1 in 20·4, or 4·8 per cent. only.—(See Tables VIII. and IX. pp. 347, 348.)

The present table, No. VII, exhibits the deaths in Frankfort and Sachsenhausen, according to the municipal standing of the parties, distinguishing also the deaths of grown-up males from grown-up females, and males and females below the age of 14. Not having been able to obtain the details of the census of December, 1840, I cannot determine the proportion of citizens to sojourners, strangers, Jews, &c. dying annually, but I have calculated the per centages in the sexes, old and young, dying annually. The average annual deaths in the whole population for the 10 years is 2·04 per cent., or 1 in 48·8, nearly 49. This is more favourable than the average for all England, from 1838 to 1841, inclusive, which is 2·22 per cent., or 1 in 45; but the average for the South Midland, Eastern, Welch, South-Eastern, and South-Western divisions of England give 1·99 per cent. of deaths, or 1 in 50 nearly; so that Frankfort is not so healthy as those divisions, but is exactly as healthy as Essex, Suffolk, Norfolk, Monmouthshire, and Wales. Although the respective mortality of males and females, separately considered, is more favourable for Frankfort, namely, males 2·09 per cent., or 1 in 47·7, and females 1·98 per cent., or 1 in 50·2, than the average of all England, which is for males 2·30, or 1 in 43, and females 2·13, or 1 in 47. Yet there are many counties in England which have more favourable indications for life and health than Frankfort; namely, Surrey, Kent, Sussex, Hampshire, Berkshire, Wiltshire, Dorsetshire, Devonshire, Cornwall, and Somersetshire, which average for 4 years, 1838—1841, for MALES 1·98 per cent., or 1 in 50·5; and for FEMALES 1·83 per cent.. or 1 in 54·6. Had the vital statistics of the neighbouring duchies to Frankfort been mixed up with those of Frankfort, I have little doubt the numerical indications would not have been so favourable for the city; for assuredly, judging from complexion and appearance, the inhabitants of both banks of the Rhine, from Holland to Strasburg, are not so healthy as the English. The per centage deaths of all France is 1 in 39·7 inhabitants, or 2·52 per cent.

TABLE VII.—*Table showing the Births, according to the Station of the Parents, together with the Sex, Condition, and Character of the Births in Frankfort and Sachsenhausen, for* 11 *Years.*

FRANKFORT.

YEARS.	Births according to condition of Parents, without reference to Sex.					Sex of Births.		Condition and character of Births.							
	From Citizen Parents.	From Resident Parents.	From Stranger Parents.	From Resident Jews.	From Stranger Jews.	Boys.	Girls.	Twins.	Triplets.	Illegitimate Boys.	Illegitimate Girls.	Boys born dead.	Girls born dead.	Posthumous Births.	Total Births.
1833	567	*176	..	*69	..	435	377	5	..	67	63	†62		4	812
1834	669	31	178	61	16	494	461	18	1	73	73	38	33	3	955
1835	639	32	187	65	18	455	486	8	..	70	68	34	18	3	941
1836	673	31	159	82	15	483	477	9	..	71	67	18	27	3	960
1837	619	31	176	75	15	501	415	11	..	65	53	32	21	3	916
1838	631	31	183	68	29	478	464	2	1	63	62	23	14	4	942
1839	645	28	204	80	36	516	477	13	..	68	74	29	21	3	993
1840	677	31	221	62	20	536	475	9	..	73	79	34	20	2	1,011
1841	666	47	226	70	31	522	518	14	..	84	96	38	28	7	1,040
1842	662	37	247	64	31	533	508	15	..	89	84	33	21	5	1,041
1843	643	28	260	62	39	511	521	12	..	88	84	32	26	4	1,032
Total in 10 years	6,524	327	2,041	689	250	5,029	4,802	111	2	744	740	311	229	37	9,831

SACHSENHAUSEN.

YEARS.	No. of Births according to condition of Parents, without reference to Sex.			Sex of Births.		Condition and character of Births.								Total Births of Frankfort and Sachsenhausen.
	From Citizen Parents.	From Resident Parents.	From Stranger Parents.	Boys.	Girls.	Twins.	Three at a Birth.	Posthumous Births.	Illegitimate Boys.	Illegitimate Girls.	Boys born dead.	Girls born dead.	Total Births.	
1833	158	30	..	106	82	3	..	2	18	11	..	..	188	1,062
1834	179	4	25	117	91	1	..	2	23	17	2	3	208	1,163
1835	189	7	30	123	103	3	..	1	27	17	7	2	226	1,167
1836	169	4	33	108	98	5	..	..	25	25	8	9	206	1,166
1837	184	12	26	106	116	2	..	1	29	22	8	5	222	1,138
1838	193	5	36	120	114	4	..	1	23	22	10	9	234	1,176
1839	184	6	26	116	100	1	..	..	20	21	4	10	216	1,209
1840	180	5	31	107	109	2	..	2	20	25	2	7	216	1,227
1841	178	14	34	119	107	3	..	1	24	19	11	4	226	1,266
1842	218	10	22	116	134	4	..	1	28	31	4	5	250	1,291
1843	189	12	22	110	113	1	1	..	34	13	6	5	223	1,255
Total in 10 years	1,863	79	285	1,142	1,085	26	1	9	253	212	62	59	2,227	12,058

* Including strangers (exclusive of dead births). † Without specifying sex.

TABLE VIII.—*Table of Deaths, according to Age, in the Towns of Frankfort and Sachsenhausen.*

YEARS.	Birth to 5 Years old.		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		Total.		Grand Total.	Observations.
	Males	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.		
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	
On the total deaths	31·9	29·3	1·7	2·2	3·5	4·1	9·3	9·5	10·3	8·5	9·6	7·5	10·2	10·1	11·2	12·5	8·3	10·8	2·6	4·4	0·18	0·42	51·5	48·5	100	In Paris under 5 = 31·9 and 29 per Cent.
On the total living	One in 149·3	One in 171·2	One in 2883	One in 2223	One in 1347	One in 1212	One in 512	One in 527	One in 461	One in 588	One in 494	One in 669	One in 464	One in 501	One in 425	One in 401	One in 571	One in 463	One in 1190	One in 1134	One in 28,693	One in 11,769	One in 48·0	One in 50·5	One in 49·3	In all England the total is 2·22 per cent., or 1 in 45; males 2·30 per cent., or 1 in 43; females 2·13, or 1 in 47.
1835	179	148	4	7	16	16	59	36	65	57	53	42	66	49	58	59	42	46	5	27	2	1	549	488	1,037	
1836	199	190	9	24	15	26	64	54	64	54	49	50	59	63	80	74	57	48	28	36	..	5	624	624	1,248	
1837	204	163	8	12	15	16	65	58	77	52	55	39	68	71	78	86	55	71	17	29	3	2	645	599	1,244	Average male deaths annually, 596·7 in 28,693 males. Ditto female deaths annually, 559·5 in 28,246 females. Total population, 56,939.
1838	208	148	13	10	36	35	57	66	72	44	57	47	59	57	65	62	51	58	14	14	1	4	633	545	1,178	
1839	202	185	10	17	33	25	60	76	62	46	57	45	55	58	56	70	40	54	21	23	..	2	596	601	1,197	
1840	170	138	13	11	20	22	54	46	59	46	54	36	67	45	66	72	50	58	15	15	1	4	569	493	1,062	
1841	227	204	9	10	18	20	58	59	66	48	71	40	52	43	68	60	55	68	15	26	..	1	639	579	1,218	
1842	166	166	14	11	10	26	41	39	50	42	65	41	61	64	68	91	53	77	12	28	1	1	541	586	1,127	
1843	175	143	13	7	29	25	46	50	47	42	62	40	70	57	68	60	49	69	15	26	1	2	575	521	1,096	
Total in 9 years	1730	1485	93	109	192	211	504	484	562	431	523	380	557	507	607	634	452	549	142	224	9	22	5,371	5,036	10,407	. . .
Average .	192·2	165	10·3	12·1	21·3	23·3	56	53·6	62·4	47·9	58·1	42·2	61·8	56·3	67·4	70·4	50·2	61	15·7	24·9	1	2·4	596·7	559·5	1156·3	. . .

	Born dead, and died in the first 4 Weeks.		Died in the 1st Year.		Died between the 2nd and 6th Year.		Died between the 7th and 19th Year.		Died between the 20th and 25th Year.		Died above 25 Years of Age.							
											Males.			Females.				
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Citizens & Residents.	Officers.	Other Classes.	Single.	Married.	Widows.		
1833	88	59	90	87	37	40	23	42	41	18	229	12	138	75	119	132	1,230	. . .
1834	99	77	110	97	29	25	29	23	32	17	232	6	106	94	141	110	1,227	. . .

TABLE IX.—*Showing the Deaths in Frankfort and Sachsenhausen, according to the Condition and State of the Parties, for* 11 *Years.*

Years.	FRANKFORT.												SACHSENHAUSEN.										Total in Frankfort and Sachsenhausen.
	Citizens.	Residents.	Strangers.	Jewish Residents.	Jewish Strangers.	Males.	Females.	Widows.	Boys, inclusive of Dead Born.	Girls, inclusive of Dead Born.	Born Dead.	Total.	Citizens.	Residents.	Strangers.	Males.	Females.	Widows.	Boys, inclusive of Dead Born.	Girls, inclusive of Dead Born.	Born Dead.	Total.	
1833	643	351*	..	*81	..	358	108	115	193	230	51	1,075	124	31	..	32	11	17	39	45	11	155	1,230
1834	650	50	278	68	19	306	125	94	250	290	..	1,065	130	3	29	29	16	16	57	44	..	162	1,227
1835	518	37	254	41	26	286	78	83	184	245	..	876	125	7	29	21	14	20	58	48	..	161	1,037
1836	615	56	292	61	27	343	117	111	186	294	..	1,051	154	10	33	28	17	16	67	69	..	197	1,248
1837	618	67	311	59	26	348	126	137	215	255	..	1,081	131	7	25	33	20	13	49	48	..	163	1,244
1838	583	50	277	57	28	311	115	91	224	254	..	995	145	9	29	30	17	11	68	57	..	183	1,178
1839	559	46	327	61	30	279	115	107	230	292	..	1,023	145	3	26	22	10	12	65	65	..	174	1,197
1840	482	71	274	66	30	314	92	87	200	230	..	923	103	8	28	26	17	18	30	48	..	139	1,062
1841	606	74	264	56	26	346	109	105	189	277	..	1,026	155	15	22	31	12	10	73	66	..	192	1,218
1842	573	64	246	59	35	316	120	127	150	264	..	977	121	11	18	36	13	11	39	51	..	150	1,127
1843	581	67	244	49	27	326	106	113	180	243	..	968	112	5	11	24	15	8	45	36	..	128	1,096
..	5,785	582	2,767	577	274	3,175	1,103	1,055	2,008	2,644	..	9,985	1,321	78	250	280	151	135	557	532	..	1,649	11,634

	Males and Females.	Above 14.		Below 14.		All Males.	All Females.
		Males.	Females.	Boys.	Girls.		
	2·04	1·4	1·06	4·9	6·06	2·09	1·98
	1 in 48·8	1 in 67·9	1 in 94·1	1 in 23·9	1 in 16·5	1 in 47·7	1 in 50·2
England—Mean of years 1838-9-40 and 1841.	2·22	..	..	..	..	2·31	2·13
	1 in 45	..	..	..	..	1 in 43	1 in 47

* Including strangers.

Note.—As there are some amalgamations of classes in the year 1833, I have struck it out from the averages. Strangers are only enumerated who have resided a year in the city.

A remarkable feature will be observed in this latter table. While the respective mortality of males and females above 14 years of age was 1·4, or 1 in 67·9 for males, and 1·06 per cent., or 1 in 94·1 for females, the proportions were reversed in the sexes under the age of 14, namely, males 4·9 per cent., or 1 in 23·9; and females 6·06 per cent., or 1 in 16·5. The first of these per centages corresponds with the per centage mortality of male children in the English tables, between the ages of 1 and 3 only, and the per centage of female deaths with that of female children between 1 and 2. At 5 years of age, in England, 1 in 60 only is calculated to die, and yet at Frankfort there is a mortality amongst female children before they are 14, almost amounting in intensity to that of the first year after birth. The average running through 10 successive years, I should have thought there might have been some great disturbing causes, some strange anomalies in the number dying annually; but the close approximations in these numbers compel me to believe that the mortality amongst children is very considerable, and more so amongst girls than boys, contrary to the usual observations.

Educational Establishments.

TABLE X.—*Educational Establishments of Frankfort; translated from two Papers communicated to the Physico-Geographical and Statistical Society, in* 1840 *and* 1841, *by Von Ravenstein.*

	Number of Pupils.					
	1839			1840		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Gymnasium	160	..	160	182	..	182
*Boys' School of the Liebfrauenkirche	136	..	136	131	..	131
Model School	309	220	529	304	218	522
†Middle School	240	152	392	258	175	433
†Weissfrauen School	436	380	816	428	381	809
†All Saints' School	252	254	506	255	247	502
†The Three Kings' School	281	269	550	293	279	572
*Female School by English Ladies	..	116	116	..	120	120
*Boys' School at the Cathedral	273	..	273	253	..	253
*Female School of the Rosenberger Union	..	273	273	..	276	276
Jewish higher School	216	186	402	220	200	420
Jewish common School, free for permanent residents	20	16	36	8	11	19
Total number of pupils	2,323	1,866	4,189	2.332	1,907	4,239

The schools marked with an * are Catholic; those with a † Protestant.

The Gymnasium is the oldest of the schools in Frankfort. It commenced in 1521. It is divided into 6 classes, and has 15 teachers.

Independently of the classics and mathematics, modern languages, singing, drawing, and calligraphy are taught.

The Gymnasium is under the inspection of the Lutheran consistory.

The Protestant popular schools are constituted by a decree of the Senate, of the 17th March, 1823, under the direction of both the Protestant consistories.

The Model School has 19 instructors and 3 instructresses, and the pupils are taught the elements of religion, natural philosophy, the German language and history, mathematics, arithmetic, geography, the French language, drawing, singing; and in the girls' department needlework.

TABLE XI.—*Number of Attendances at the Middle, Weissfrauen (White Women), Allerheiliger (All Saints) and Three Kings' Schools, since their foundation.*

	Middle School.			Weissfrauen School.			All Saints' School.			Three Kings' School.			Grand Totals.
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	
1824	241	221	462	312	273	585	289	296	585	277	290	567	2,199
1825	280	258	538	347	313	660	302	288	590	289	284	573	2,361
1826	273	256	529	344	338	682	295	283	578	282	255	537	2,326
1827	281	266	547	377	350	727	290	275	565	303	279	582	2,421
1828	280	263	543	401	371	772	294	301	595	323	301	624	2,534
1829	298	263	561	417	380	797	321	307	628	337	291	628	2,614
1830	269	258	527	432	397	829	315	314	629	344	293	637	2,622
1831	254	238	492	449	405	854	310	290	600	343	293	636*	2,582
1832	248	231	479	468	398	866	307	295	602	316	273	589	2,536
1833	238	208	446	411†	347	758	299	283	582	299	263	562	2,348
1834	222	194	416	403	359	762	328	289	617	317	259	576	2,371
1835	228	185	413	445	388	833	309	284	593	310	272	582	2,421
1836	226	180	406	443	387	830	305	276	581	307	267	574	2,391
1837	229	176	405	443	387	830	299	271	570	289	260	549	2,354
1838	216	161	377	434	386	820	266	264	530	275	269	544	2,271
1839	236	154	390	436	380	816	255	249	504	281	269	550	2,260
1840	249	172	421	428	381	809	255	247	502	293	279	572	2,304
			7,952			13,230			9,851			9,882	40,915

Average . . . . $2406\frac{13}{17}$

* In this year the Infant School at Sachsenhausen was opened, and the attendances noted in the next year's total.

† In this year a Class was discontinued; but restored in 1835.

The Middle School stands, in respect to the compass and extent of the instruction it gives, between the Model and the rest of the popular schools. It has 10 instructors and 4 instructresses. Religion, reading, calligraphy, arithmetic, the German and French languages, natural history, geography, history, drawing, and singing; and in the female department needlework is taught.

The White Ladies' School, (Weissfrauen Schule,) so called from its being held in the convent of the former nuns, called White Ladies. It was opened in 1813, and until the year 1824 had the character of the present Middle School. It has 6 instructors and 3 instructresses.

All Saints' School (Allerheiliger Schule) has 6 teachers and 3 instructresses.

The Three Kings' School, (Die Drei-Königs' Schule,) in the suburb of Sachsenhausen, is so called from its proximity to the church dedicated to those mysterious personages so well known in German religious legends. It has 6 teachers and 3 instructresses.

In these 3 last popular schools, 2 of which have existed since 1824, the children are taught religion, reading, writing, German, arithmetic, singing, the understanding of natural objects, geography; and in the female department needlework. It is to be remarked, that in all of these schools singing is taught, and in the two first the French language; but in none is the English taught.

The Catholic schools are under the direction of the Church and School Commission.

The first is the boys' school in the Liebfrauen Kirche; it has 9 teachers, and is nearly on the same plan as the Middle School.

The female boarding school, by English ladies, for the daughters of persons of the middle classes, has 4 teachers and 3 instructresses. History, German, geography, natural history, singing, arithmetic, calligraphy, drawing, and needlework are taught.

The boys' school at the cathedral has 3 teachers, and is on the footing of the Protestant common school.

The girls' school of the Rosenberger Union has 2 teachers and 4 instructresses. The usual instruction of the common or popular schools is taught in this school. The school owes its origin and name to a widow of the name of Anna Rosenberg, who in 1452 founded a community or convent of the Dominican order, for 12 daughters or widows of Frankfort citizens. Religious instruction in all the Catholic schools is given by priests.

It will be observed, that in the Catholic schools, as in the Protestant, singing is taught in all of them. The French language is taught in one, and no mention is made of the English in any.

The institutions for the instruction of the Jewish community consists of a superior and common school. Both were established in 1804 by the philanthropy of private individuals; but at a later period the State raised them to the dignity of public schools. At present there are 12 classes in the superior school, namely, 5 for boys and 5 for girls, and 2 classes for girls and boys in common. The common school has two classes for girls and boys in common. In the two schools there are 17 teachers and 5 instructresses. The inspection of the schools is in the Mixed Church and School Commission; but the management is in the hands of 3 Jewish elders and of 5 members of the Jewish community, constituting a school council.

Besides the above public schools, there are several private institutions both for males and females, on a good footing, the number of scholars attending which are stated in the following tables. A school also for the deaf and dumb; two French schools; and many private tutors for teaching foreign languages; also places where gymnastic and other exercises are taught; and infant schools; and since the 21st May, 1832, the children of the poor, between the age of 2 and 6, are attended to.

TABLE XII.—*Attendance of Pupils at Educational Schools, and those of the Fine Arts (Bildingsanstalten), during the Years* 1839 *and* 1840.

—	1839 As Numbers stood Jan. 1840.			1840 As Numbers stood Jan. 1841.		
	Number of Pupils.			Number of Pupils.		
	Males.	Fem.	Total.	Males.	Fem.	Total.
Städel's Institution for the cultiva- of the Fine Arts:*—						
a. Painting	21	..	21	22	..	22
b. Drawing and Modelling .	110	..	110	95	..	95
c. Sculpture	27	..	27	4	..	4
d. Architecture	67	..	67	7	..	7
e. Copper-plate Engraving .	6	..	6	8	..	8
Total	..	..	231	..	..	136
Association for promoting the Useful Arts, and their Auxiliaries:—						
a. Sunday School for Operatives	312	..	312†	180	..	180
b. Trade and Craft School .	130	..	130	90	..	90
c. Reading Association‡ . .	..	..	..	277	..	277
Institution for the Education of the Deaf and Dumb	4	6	10	6	7	13
Institution for the Education of the Blind	5	..	5	5	..	5
Ladies' Association School§ . . .	..	50	50	..	40	40
Orphan House	122	66	188	128	70	198
Infant School in Frankfort . . .	96	56	152	73	88	161
Infant School in Sachsenhausen .	108	92	200	100	100	200
Total	777	270	1,047	859	305	1,164

* Several of the pupils are enumerated under more than one head.
† Including the Reading Association.
‡ In the year 1840 the Reading Association is separated from the Sunday School for Operatives.
§ Independently, in the year 1840, of 13 in the Charitable Institution.

TABLE XIII.—*Attendance at Private Schools during the Years* 1839 *and* 1840, *in Frankfort; from a Report by Aug. Ravenstein.*

—	1839			1840		
	Numbers.			Numbers.		
	Males.	Fem.	Total.	Males.	Fem.	Total.
a. Boys' Educational Schools: those of Stallwag, Hassel, Fenner, Doctor Weil, Doctor Geison, and Behagbel.	325	..	325	408	..	408
b. Girls' Educational Schools: those of Behagbel, Bereht, Bönig, Kiefhaber, Lehn, Rumpf, and Schmidtt. . .	..	325	325	..	347	347
c. Other Private Schools:—						
Drawing Schools	..	..	*40	..	..	*38
Strobel's Drawing School . . .	..	..	60	..	..	60
Gymnastic Institution	104	11	†115	66	6	†72
Total	429	336	865	474	353	925

* Of which number 12 are taught the arts of manufactures, and 4 engraving on copper.
† This number is exclusive of 50 free scholars from the Orphan House. The attendance at the Gymnastic Institution varied according to the season. Summer of 1838 = 72; winter of 1838-9 = 58; summer of 1839 = 115; winter of 1839-40 = 66; summer of 1840 = 96; and winter of 1840-41 = 86.

TABLE XIV.—*Summary of the Attendance of Pupils at all the Schools in Frankfort during the Years* 1839 *and* 1840; *from a Report by Aug. Ravenstein.*

1839														
Number of Scholars in all the Schools, Public and Private.														
Public Schools.			Orphan Houses and Ladies' Association.			Private Schools			Deaf, Dumb, and Blind Schools.			Total.		Grand Total.
M.	F.	Total.	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	
2,323	1,866	4,189	122	116	238	335	325	660	9	6	15	2,789	2,313	5,102
1840														
2,332	1,907	4,239	128	110	238	408	347	755	11	7	18	2,779	2,471	5,250

Scientific and other Institutions.

TABLE XV.—*Number of Members constituting the Literary, Scientific, and other Societies in Frankfort.*

—	1839					1840				
	Members.					Members.				
	Effective.	Honorary.	Subscribing.	Corresponding.	Total.	Effective.	Honorary.	Subscribing.	Corresponding.	Total.
Museum	372	19	117	..	508	233	15	163	..	411
Dr. Senkenberg's Natural Philosophy Society . .	43	256	384	..	683	42	227	..	404	673
Physical Society . . .	161	25	63	19	268	180	25	..	19	224
Geographical Society . .	124	1	..	21	146	125	1	..	24	150
Society for the promotion of the Useful Arts, and their Auxiliaries . .	508	30	..	197	735	500	30	..	198	728
Reading Society* . . .	314	..	..	..	314	290	..	..	..	290
Society of Arts† . . .	..	..	1154	..	1154	..	..	1121	..	1121
St. Cecilia Society, chiefly for Ancient and Sacred Music	139	7	..	..	146	108	40	..	..	148
The Song Garland Society	106	5	..	..	111	111	9	..	..	120
Instrumental Music Society	83	3	..	103	189	83	3	..	96	182
Ballad and Table Song Society	58	6	..	..	64	73	6	..	..	79
Orpheus Society . . .	50	4	..	..	54	43	4	..	..	47
Vocal and Instrumental Music Society‡ . . .	100	..	..	..	100	100	..	..	..	100
Total . . .	2058	356	1718	340	4472	1888	360	1284	741	4273

* Divided into two classes: in 1839 there were 236 of first and 78 of second class; in 1840 there were 232 of first and 58 of second class. † This Society is divided into money shares.
‡ For church music, and most of the members are honorary.

The Museum, so called, was originally an association for cultivating arts and science; but latterly it has chiefly been distinguished for its encouragement of music. It meets in the winter, every 14 days.

The Museum of Natural History is not a State foundation, but is supported by an association of members. The collection is very good, particularly in osteology, and it owes very much of its present value to the zeal, ability, and generosity of the distinguished traveller, Dr. Edward Rüppell. With a liberality worthy of imitation elsewhere, this private institution is open to the public on Wednesdays and Fridays in each week.

Senkenberg's Natural Philosophy Society was founded and named in honour of the Doctor. Its library is open on Mondays and Fridays.

The Physical Society was founded in 1824. Its objects are researches in physics and chemistry, and it has a good cabinet and laboratory.

The Geographical Society has existed since June, 1836, and with it is associated a section for statistics. It possesses suitable books, maps, charts, and relief models.

The Society for the promotion of the Useful Arts, or the Polytechnic Society, had its origin in 1817, in the formation of a Sunday school for operatives, who were taught drawing, architectural drawing, geography, &c. To this in 1828 was added the school of arts, embracing algebra, geometry, and mechanics, taught in the evenings of week days, and on Sunday evenings. In winter a reading-room was open, from 5 to 8, for the associates and pupils. In 1822 a savings' bank resulted from the institution. Horticulture and agriculture are systematically encouraged. Exhibitions of produce take place, and prizes are given.

The Society of Arts was founded in 1835. It has its exhibition of objects of arts, and prizes are given either in medals or in honourable mention.

In 1835, a society was founded for encouraging morality and good conduct amongst servants, by the annual distribution of prizes to those who had served long and faithfully; and, in 1837, an institution for teaching the blind to read was established.

The Reading Society was founded in 1788. It is managed by 6 directors, and the society consists of 2 classes of fellows: citizens who pay 14 florins annually, and those not citizens, who pay 16 florins. It is open from 9 A.M. to 9 P.M.

The Musical Associations of Amateurs are numerous and excellent; and I heard Handel's unpublished oratorio of Solomon performed by 60 or 70 ladies, and 80 or 90 gentlemen, of the society of St. Cecilia, in a manner which certainly no private association in England could equal. The first of them — the society of St. Cecilia, (Der Cäcelien verein) —was projected by the deceased Scheble, in 1818. It gets up the master-pieces of religious music of Mozart, Bach, Handel, and Haydn.

The Song Garland Society (Der Lieder kranz) meets weekly in a private room, and strangers can be introduced by the members. Its object is part singing. From this body originated Mozart's Institution, in 1838, to assist musical talent in young persons, and, when the interest of their capital amounts to 2,000 florins per annum, to found a conservatory.

The Instrumental Music Society has the object indicated by its name. It commenced in 1834.

Of the other three societies—"Die Lieder tufel," "Der Orpheus," and "Der Vocal und Instrumental musickverein," the first is for glees and table songs, and the other two for vocal and instrumental music.

Charitable Institutions.

TABLE XVI.—*Statistics of the Hospital of the Holy Ghost.*

Years.	Admitted.		Discharged Cured.		Discharged not Cured.		Died.		Per Centage of Deaths, Men.	Per Centage of Deaths, Women.	Per Centage of Deaths, Men and Women.
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.			
1834	709	654	590	533	35	32	48	39	6·77	5·96	6·38
1835	699	736	574	595	32	32	45	29	6·58	3·95	5·16
1836	1,011	795	842	704	42	20	62	44	6·13	5·53	5·86
1837	909	733	777	615	30	38	60	32	6·60	4·36	5·60
1838	1,001	885	812	740	52	37	60	36	5·99	4·07	5·08
1839	999	833	832	695	39	25	68	41	6·80	4·92	5·94
1840	930	832	748	677	48	32	62	43	6·66	5·16	5·99
1841	918	878	753	745	52	50	53	26	5·77	2·96	4·39
1842	962	890	770	729	89	58	38	28	3·95	3·14	3·56
1843	952	833	787	642	56	69	54	40	5·67	4·80	5·26
Total .	9,090	8,069	7,485	6,675	475	393	550	358	6·05	4·43	5·29
Annual Averages	909·0	806·9	748·5	667·5	47·5	39·3	55·0	35·8			

The following are the hospitals:—

Senkenberg's Citizen and Sojourners' Hospital. This was founded by Dr. Senkenberg, who in his will of the 18th August, 1763, left a large sum for the establishment of two institutions, a hospital and a school of medicine and anatomy; one-third of the sum to the former, and two-ninths to the latter. The hospital is for the reception of Christian citizens and sojourners, and in the lapse of time has been considerably enriched by donations, particularly from Simon Moriz von Bethmann, and Peter Meermann, and Madame Anna Elizabeth Klots. The interior management is truly a pattern; it makes up 110 beds. The noble founder, alas! did not live to see the completion of his work, for on the 15th November, 1772, a fall from the entablature of the well-nigh finished building closed his career. With this foundation is joined a bequest of 100,000 florins, from the senator John Charles Brönner, for the constant support of 6 old unencumbered citizens, incapable of work, who are to spend the rest of their days in peace and comfort, as residents in the hospital. A botanical garden is attached to the hospital, in which is the tomb of the founder. Under the same roof is the Senkenberg Natural History Society.

The hospital of the Holy Ghost is intended for sick Christian strangers, either domestics or operatives employed by the citizens, or sojourners. The hospital has been known since the 12th century; but the present building is modern, large, and handsome. The English servants of English resident families are received into the hospital, and a trifling daily sum is paid for their support. It can make up from 280 to 300 beds.

The present building of the Hospital for Lunatics (Das Jerrenhaus) owes its origin to a donation of 20,000 florins from the poor-box, and its continued support to the same source. It has a very good sleeping ward, and a suitable garden.

The Hospital for Epileptics forms part of the Lunatic Hospital.

There is also a Lock Hospital, under the inspection of the police; and a Military Hospital for the garrison, of 80 to 90 beds.

The Jews have a hospital for their sick, on a very good footing, with separate wards for males and females. The Rothschild family have been, and are, great contributors to this, as to other institutions for the Jews.

The general or common Poor-Box (Der allgemeine all mosen kasten) was founded in 1428, by the priest John Weissbender. Ten years later John von Holzhausen, and, subsequently, others, increased its funds by gifts, in money and in lands and rents. The executive committee distribute yearly in the 14 quarters of the town a large quantity of bread and work, besides ready money, which amounts to more than 50,000 florins (4,170*l.*) Its charity is carried to the doors of the humble poor; and the very large expenditure is kept up by legacies, and free contributions on Sundays at the Evangelical churches. Considerable though these may be, they are frequently insufficient, and the City Chest has to assist largely. Independently of the common Poor-Box, each religious community has a poor-box for its own poor; and so well are they kept from being a public spectacle and annoyance, that I must do Frankfort administration the justice to say, that during my residence of 7 months in the winter and spring of 1843–44, I never was accosted but once in the streets for charity. Each of the 14 quarters has its committee, who examine into every individual case, and prevent fraud and idleness.

Police and Criminal Courts.

The following tables are copied from official returns in the police offices; for which purpose a German friend was good enough to employ and pay a competent copyist. The table as a whole is satisfactory, although it may not quite support the impressions of some with respect to the comparative unsophistication of German habits and manners. Offences not of a criminal nature have progressively increased from 1,185 in 1840, to 1,523 in 1843. In the first year about every 56th person passed through the hands of the police; and in the last year about every 43rd person. The average annual offences not criminal is 1,347, which gives about one offence to every 49 inhabitants. Frankfort, however, has above 100 per cent. the advantage of London; where it is found that about 1 in 22 of the inhabitants passes through the police courts, chiefly, however, for drunkenness, or brawls consequent upon drinking; while in the Frankfort table there is not any entry at all of drunkenness as an offence. The two chief offences in the table are "larceny," and "quarrels, disputes, brawls." The former class of offences appears to have increased progressively and considerably, not only in the city, but in the dependent villages; for the trespasses for the most part seem to be for petty depredations, while the second class of offences, quarrels, &c., have gradually diminished. The

Germans have the characteristics of a good humoured people, and I am somewhat surprised to find the instances of brawls and insults so numerous.

Analysis of all the Investigations and Trials, which came before the Court of Police at Frankfort during the years 1840, 1841, 1842, *and* 1843, *after the Statute of December* 15*th*, 1835.

	Number of Cases.				
	1840	1841	1842	1843	Total.
I. Offences against property, larceny, &c.	281	320	374	389	1,364
II. Offences against the health of the inhabitants	58	58	47	46	209
III. Offences against public morals, modesty, namely debauchery, bullying, and concubinage	8	7	17	5	37
IV. Offences against religion	..	..	..	..	..
V. Real insults, as fighting in the streets, house disturbances, and domestic brawls	212	165	171	146	694
VI Verbal insults	49	45	51	30	175
VII. Injuries on public property and tearing up of *court seals*, &c. &c.	4	5	..	2	11
VIII. Assistance to prisoners in escaping from the custody of the police	..	..	..	..	..
IX. Interruption of public pleasures	..	..	..	..	..
X. Offences against the censorship (laws of the press)	7	13	6	4	30
XI. Prohibited societies and meetings	..	..	..	..	..
XII. Other different offences against the public peace by dangerous threatening, &c.	6	9	3	5	23
XIII. Cruelty to animals	2	3	4	5	14
Besides these cases the police court discharged trifling offences	274	354	390	473	1,491
In the 8 villages belonging to the free City of Frankfort there were brought before the magistrates the following cases of trespasses over gardens and fields, and stealing fish	258	271	273	286	1,088
Requisitions of foreign governments were made for the apprehension of offenders	26	31	64	132	253
Total	1,185	1,281	1,400	1,523	5,389

The paucity of offences against public property cannot fail to strike the attention, surrounded as the city is by beautiful public gardens and promenades. Offences of the press in this free state indicate that the office of censor is not an entire sinecure.

The report of the criminal court is certainly favourable as far as offences against the person go. I have elsewhere mentioned, upon verbal authority, however, that there has been but one execution for murder in Frankfort for the last 60 years; and the report shows that there are only 3 cases of supposed assassination, and 19 cases of wounding in 4 years. The Frankforters are evidently averse from shedding blood. The number of suicides 68, and attempts at suicide 13, in 4 years, considerably surprised me, for the people are neither excitable nor nervous, and they are less exposed to those extreme cases of destitution which prompt to suicide in London.

If, however, offences against the person exhibits a favourable picture, those against property are not equally so. The number of cases of robbery, both with and without housebreaking, shows that the system of watch and ward needs some improvement. The other offences against property are few in number, and unimportant; but fires, supposed incendiary, are noticed.

Reports of the Criminal Courts.

	Number of Cases.				
I. *Crimes against the Lives and Safety of the Inhabitants.*	1840	1841	1842	1843	Total
1. Assassinations	..	1	..	2	3
2. Suspected assassinations	..	..	1	..	1
3. Suicides	17	14	18	19	68
4. Attempts at suicide	3	8	2	..	13
5. Suspected rapes	..	2	..	..	2
6. Wounding	4	5	4	6	19
7. Debauchery with children	1	2	2	..	5
8. Suspected attempt at poisoning	2	1	1	..	4
9. Dead children found	3	2	..	..	5
10. Exposition of new-born children	1	1	1	..	3
11. Suspected abortions	3	1	1	..	5
12. Concealed pregnancy and accouchements	1	1	..	..	2
13. Insolence against the magistrates	..	..	1	..	1
14. Perjury	..	1	2	..	3
15. False depositions of witnesses	..	1	..	..	1
16. Deaths through being run over	1	..	..	1	2
17. Dangerously using guns	1	..	1	..	2
18. Suspicion of attempting sodomy	1	..	..	..	1
Total	38	40	34	28	140
II. *Crimes against Property.*					
1. Highway robbery	..	..	..	1	1
2. Robbery without housebreaking (above 100 florins)	36	50	34	34	154
3. Robbery with housebreaking	52	33	14	42	141
4. Receivers of stolen goods	9	..	13	14	36
5. Issuing false money	..	1	..	..	1
6. Coining	..	..	1	..	1
7. Forgery of Prussian bank notes	..	..	1	..	1
8. Embezzlements	2	5	4	..	11
9. Swindling (above 100 florins)	2	2	5	5	14
10. Fraudulent borrowing	..	2	..	..	2
11. Forgery	..	1	1	..	2
12. Gambling	..	1	..	..	1
13. Suspected incendiarism	1	1	1	..	3
Total	102	96	74	96	368

I have already stated that the prices of all provisions are fixed by the police once a fortnight; and as the means and comforts of a people can best be appreciated by the quantity they can get for their money, I subjoin one of the official prices tax proclamations, from 29th February to 13th March, 1844:—

Bread :—Price and Weight.	Weight. lbs.	Weight. oz.	Prices. Kreutzers.	Prices. Hellers.
Rye bread, second sort	4	..	12	..
Ditto ditto	2	..	6	..
Ditto ditto	1	1	3	..
Ditto first sort	6	..	19	2
Ditto ditto	3	..	9	3
Wheat, or, so called, priests' bread	1	26	8	..
Ditto ditto	..	29	4	..
Ditto ditto	..	14½	2	..
Ditto ditto	..	7½	1	..
Milk bread	..	4¾	3	..
The inhabitants of the 8 villages who bring their bread for sale in the town market are obliged to sell at a cheaper rate; for instance :—				
Rye bread, second sort	4	..	11	..
Ditto first sort	6	..	18	2

Prices of Meat.	Kreutzers.	Hellers.
Beef per lb of 16 ounces English	13	1
Veal ditto ditto	11	1
Mutton ditto ditto	12	1
Pork ditto ditto	13	1

Beef and pork, therefore, are about 4⅓*d.* English per lb.; veal not quite 4*d.*; and mutton 4*d.* The butcher is obliged to add ½ an ounce (loth) to each lb.

Beer is 8 kreutzers the mug, or quart.

The price of flour per sack of 135 lbs. varies from 13 florins 8 kreutzers, to 6 florins 34 kreutzers, according to quality and the quantity of bran left in.

Rye flour 7 florins 59 kreutzers per sack.

In the same way the price of corn, hay, and straw, &c., is fixed.

The florin is 1*s.* 8*d.*; the kreutzer ⅓ of a penny; and the heller $\frac{1}{112}$ of a penny English.

Railroad.

It would scarcely be right to omit all mention of a public undertaking which is very creditable to Frankfort, not only for the manner in which it is managed, and the accommodation assured to the public, but to the cheapness of transit for individuals. It was commenced in 1837, and runs through three states, although only 43,350 metres long, from Frankfort viâ Kastel, to Bieberich. Hesse got 88,263 florins for its share of the ground, Nassau 327,813 florins, and Frankfort paid 93,497. The total cost of the ground was 523,623 florins; the buildings and construction 2,065,256 florins; the locomotives 495,207 florins; and at the end of 1840 there were 8 engines, 80 carriages, and 21 transport waggons in use. The cost of the administration 58,242 florins, which appears singularly economical. There are 4 classes of payers, the whole distance from Frankfort to Weisbaden being 2 florins 42 kreutzers; 1 florin 48 kreutzers; 1 florin 15 kreutzers; and 51 kreutzers. In the year 1839 the persons who passed were 61,766, and the money received 16,464 florins. In 1840 the numbers were 658,564 persons, and the receipts 338,374 florins: the outlay for 1840 was 140,787 florins. The whole

outlay from 1837 to 1840, including the 3,000,000 of capital, in 12,000 shares of 250 florins each, was 3,491,059 florins; and the whole outlay, including dividends and a balance of 74,795 florins, at the end of 1840, amounted to the same sum. Public confidence fluctuated exceedingly from 1837 to 1840—the 100 florin shares varying from 164 in May, 1837, to 103 in January, 1839. In December, 1840, the 100 florin share had risen to 131; and it is progressively increasing, and in February, 1844, it was nearly 148 florins.

I have now exhibited a statistical picture, in which the social body is portrayed as a piece of mechanism, the several parts of which are to perform their respective functions according to the laws prescribed for their operation: there is not to be any increase nor any diminution of action; nothing is to go out of its course. There is no doubt, a community so acting mechanically is free from many of those evils to which the unimpeded industry, speculation, and impulses of men give rise. There are few great crimes; indeed, there has been but one execution in Frankfort (for murder) since 1793; comparatively few offences against persons and property; no external and offensive indications of pauperism; immorality is veiled from the public eye; and a general appearance of well-being seems to obtain. But there is no progress; man in his social relations is at a stand-still; the past is the present, and the present is the future, both for the state and its citizens. No doubt such a state of things exhibits a certain amount of good, which may constitute an Utopia for the money-changer, the bill-broker, the commission agent, and even the merchant and banker; but which must be abhorrent to the lofty aspirations of the philosopher, the philanthropist, and the statesman, who look confidently to gradual amelioration in the moral, intellectual, and physical condition of men, societies, and states.

PROCEEDINGS OF THE STATISTICAL SOCIETY OF LONDON.

First Ordinary Meeting, 1844–45, *Monday*, 18*th November*, 1844.
Lieut.-Colonel Sykes, V.P., in the Chair.

The following gentlemen were elected:—

Julius Jeffreys, Esq.	Gregory Seale Walter, Esq.
B. Smith, Esq., M.P.	A. A. Knox, Esq.

The following gentlemen were proposed as candidates for admission into the Society:—

John Bright, Esq., M.P.	Arthur Parish, Esq., B.A.
James Blyth, Esq.	Major-General John Briggs, F.R.S.

Thomas Tooke, Esq., V.P., announced to the meeting the titles of the papers read before the Statistical Section of the meeting of the British Association for the advancement of Science at York.

A paper by Dr. Balfour, of the Grenadier Guards, was read, entitled, "A Comparison of the Sickness, Mortality, and prevailing Diseases among Seamen and Soldiers, as shown by the Naval and Military Statistical Report."

PERIODICAL TABLES.

The following set of Tables for the Quarter ended 30th September, 1844, is characterized by some omissions which require explanation. In the Table showing the "Mortality" of the country at large, the columns showing the number of deaths registered annually, in each district, in the several years from 1838 to 1843 inclusive, are omitted, but they will be found already entered in Part III., p. 271. The Table of the "Prices of Provisions, Fuel, &c." is omitted, because few of the returns from which it had to be abstracted, were received at the office of the Poor Law Commissioners at the date of our sending the rest to press. The abrupt termination of the "Currency" Tables is caused by the provisions of the Act of the last Session (6 and 7 Vic. c. 32) requiring the issue of such returns only as do not supply the means of continuing them in their present form. In the next number they will be recommenced from the date of their termination, in the form enforced by the recent changes.

BILLS OF MORTALITY.

"The quarterly returns are obtained from 115 districts, sub-divided into 576 Sub-districts. *Thirty-four* districts are placed under the metropolis, and the remaining 81 districts comprise, with some agricultural districts, the principal towns and cities of England. The population was 6,578,912 in 1841."

The deaths registered in the last quarter (ending September 30th) were 38,784; or 141 less than the deaths (38,925) in the June quarter; and 1701 more than 37,083, the average of five previous September quarters. Allowing for the increase of population, the mortality will be found to be about the average of the summer quarter, (July, August, September); that quarter being now the least fatal in the year.

The deaths in the Metropolis amounted to 11,825; which are 354 more than were registered in the spring quarter, and 694 above the average uncorrected for the increase of population. *Small-pox* and *Scarlatina* were both epidemic. The deaths from *Small-pox* in the first week of the quarter were 36, in the last 37; from *Scarlatina* 58 in the first week, 85 in the last, and 99 in the tenth. *Measles* was fatal but to a small extent; *Typhus* showed a tendency to increase, for the deaths from this disease, including what is sometimes called "common continued fever," and "fever," amounted to 424; while the average is 352.

In the country districts the most remarkable increase of mortality occurred in Cornwall; in the Redruth and Penzance districts the following were the results of registration:—

	Average Annual Deaths in 5 Summer Quarters.	Deaths in the last Quarter.
Redruth	218	419
Penzance	216	475

Measles and *Hooping Cough* prevailed in both the districts. *Small-pox* has been epidemic in many districts all over the kingdom, and has proved fatal to great numbers, whose vaccination had been neglected.

The return includes the deaths of *nine persons* who were suffocated or trampled to death at Nottingham, whilst witnessing a public execution. At Stockport six persons were accidentally killed by the falling of a wall during a heavy storm of rain.

The mean temperature at the Royal Observatory, *Greenwich*, was 58°·9, or 2° *lower* than the mean temperature of Greenwich on an average of twenty-five years. The mean of the highest temperature of day was 66°·9, the mean of the lowest temperature of night 51°·4; the difference 15°·5. The highest temperature attained in the sun was 115° in the week ending July 27th; the lowest temperature on the grass in the same week was 40°·5; the temperature of the air ranged in the same week from 85°·1 to 53°·7. In the 13 weeks the lowest temperature of the air was 40°·6; of the grass on the ground 30°·0. The difference between the dew point and air temperature was 5°·3. The fall of rain was 5·38 inches.

Districts in which the Mortality was GREATER *than the mean mortality of the corresponding quarter in the same district.*—The west, north, and south district of the Metropolis, Portsea Island, St. Albans, Wycombe, Bedford, Colchester, Plymouth, *Redruth*, *Penzance*, Stroud, *Hereford*, *Shrewsbury*, Kidderminster, *Wolverhampton*, Birmingham, *Aston*, *Coventry*, Nottingham, Liverpool, West Derby, Blackburn, Chorlton, Bradford, *Merthyr-Tydfil*.

Districts in which the Mortality was less than the average Mortality of the corresponding quarter in the same districts.—Central districts of the metropolis, *Norwich*, Devizes, Exeter, Basford, Stockport, Macclesfield, Great Boughton, Bury, Prescot, Salford, Ashton, Sheffield, Hull, *Sunderland*, Tynemouth, Newcastle-on-Tyne, Pontypool, Wrexham.

MORTALITY OF THE COUNTRY.

Quarterly Table of the Mortality in 115 *of the Districts of England (including the principal Towns) showing the Number of Deaths registered in the Six Years, the Average Number of Deaths in the Five Summers,* 1838-42, *and the Number of Deaths in the Summer Quarter of* 1844, *ending* 30*th September* —*(continued from p.* 272.)

DISTRICTS.	Population 1841.	1838–42 Quartly. Average† Of Five Years.	1838–42 Quartly. Average† Of Five Sumrs.	Deaths in the Summer Quarter, ending Sept. 30 1844.
*Metropolis.**				
West Districts	301,326	1,751	1,617	1,822
North Districts.	366,303	2,112	1,966	2,293
Central Districts	374,759	2,395	2,238	2,190
East Districts .	393,247	2,640	2,567	2,547
South Districts.	479,469	2,850	2,632	2,973
Total . .	1,915,104	11,749	11,020	11,825
South Eastern Division.				
Maidstone . .	33,210	181	161	160
Brighton . .	46,742	251	254	233
Isle of Wight .	42,547	182	170	187
Portsea Island .	53,036	297	272	345
Winchester . .	23,044	116	117	100
Windsor . . .	20,502	97	83	99
South Midland Division.				
St. Albans . .	17,051	83	74	100
Wycombe . .	34,150	187	163	180
Oxford . . .	19,701	102	96	90
Northampton .	28,103	168	157	162
Bedford . . .	31,767	171	146	175
Cambridge . .	24,453	144	134	133
Eastern Division.				
Colchester . .	17,790	113	106	124
Ipswich . . .	25,254	150	144	135
Norwich . . .	61,846	396	363	306
Yarmouth . .	24,031	118	117	115
South Western Division.				
Devizes . . .	22,130	115	99	84
Dorchester . .	23,380	107	88	99
Exeter . . .	31,333	192	190	160
St. Thomas . .	47,105	214	202	208
Plymouth . .	36,527	208	201	257
Redruth . . .	48,062	249	218	419
Penzance . .	50,100	236	216	475
Bath . . .	69,232	423	370	361
Western Division.				
Bristol . . .	64,298	476	429	435
Clifton . . .	66,233	362	333	350
Stroud . . .	38,920	192	154	184
Cheltenham .	40,221	221	196	191
Hereford . .	33,646	188	165	197
Shrewsbury . .	21,529	137	118	169
Worcester . .	27,130	171	162	167
Kidderminster .	29,408	149	122	167
Dudley . . .	86,028	515	450	466
Walsall . . .	34,274	202	170	168
Wolverhampton	80,722	508	437	526
Wolstanton . .	32,669	203	180	169
Birmingham .	138,187	901	876	932
Aston . . .	50,928	279	245	317
Coventry . .	31,028	191	176	231

DISTRICTS.	Population 1841.	1838–42 Quartly. Average† Of Five Years.	1838–42 Quartly. Average† Of Five Sumrs.	Deaths in the Summer Quarter ending Sept. 30, 1844.
North Midland Division.				
Leicester . .	50,932	350	312	339
Lincoln. . .	36,110	184	159	143
Nottingham .	53,080	361	366	394
Basford. . .	59,634	310	266	233
Derby . . .	35,015	217	196	200
North Western Division.				
Stockport . .	85,672	585	505	462
Macclesfield .	56,018	370	307	283
Great Boughton (including Chester) . .	49,085	305	253	208
Liverpool . .	223,054	1,875	1,830	1,945
West Derby (adjoining Liverpool) .	88,652	509	498	602
Blackburn .	75,091	465	381	474
Preston. . .	77,189	513	424	450
Rochdale . .	60,577	396	325	316
Bury . . .	77,496	506	405	380
Bolton . . .	97,519	668	559	534
Wigan . . .	66,032	434	357	353
Prescott . .	43,739	260	213	174
Chorlton . .	93,736	591	508	653
Manchester .	192,408	1,597	1,462	1,441
Salford . . .	70,228	530	501	417
Ashton . . .	173,964	1,196	1,008	918
York Division.				
Sheffield . .	85,076	598	530	494
Huddersfield .	107,140	514	460	447
Halifax. . .	109,175	566	474	458
Bradford . .	132,164	794	728	861
Leeds . . .	168,667	1,107	1,042	997
Hull . . .	41,130	289	284	247
York . . .	47,779	274	243	247
Northern Division.				
Sunderland .	56,226	369	353	267
Gateshead .	38,747	238	229	228
Tynemouth .	55,625	315	296	242
Newcastle-on-Tyne . . .	71,850	487	485	414
Carlisle . .	36,084	213	162	165
Cockermouth .	35,676	173	152	146
Kendal . . .	34,694	184	162	154
Welsh Division.				
Abergavenny .	50,834	315	260	244
Pont-y-pool .	25,037	147	123	97
Merthyr Tydvil	52,864	343	283	397
Newtown . .	25,958	129	114	101
Wrexham . .	39,542	217	185	159
Holywell . .	40,787	204	162	177
Anglesey . .	38,105	154	126	122
Total exclusive of the Metropolis	4,663,808	29,049	26,063	26,959
Grand Total	6,578,912	40,798	37,083	38,784

* The deaths in the Metropolis for the years 1840-1-2 have been derived from the weekly tables, the Returns for each year comprising 52 weeks, or 364 days. The last quarter in the metropolis ended Sept. 28, 1844. The returns from other places are for the years ending December 31, and the quarter ending Sept. 30.

† Wandsworth District is included in the return for the Metropolis.

MORTALITY OF THE METROPOLIS.

A Table of the Mortality in the Metropolis, showing the Number of Deaths from all Causes, registered in the 13 *Weeks ending* 28*th September*, 1844.

CAUSES OF DEATH.	Quarterly Average of Deaths in the Five Summers of 1839-43.	Deaths in the Summer Quarter ending Sept. 28, 1844.
ALL CAUSES	11,131	11,825
SPECIFIED CAUSES	11,083	11,797
I. Zymotic (or Epidemic, Endemic, and Contagious) Diseases	2,357	3,243
SPORADIC DISEASES.		
II. Dropsy, Cancer, and other Diseases of uncertain or variable Seat	1,312	1,239
III. Diseases of the Brain, Spinal Marrow, Nerves, and Senses	1,968	1,929
IV. Diseases of the Lungs and of the other Organs of Respiration	2,884	2,782
V. Diseases of the Heart and Blood Vessels	235	326
VI. Diseases of the Stomach, Liver, and other Organs of Digestion	1,085	1,027
VII. Diseases of the Kidneys, &c.	63	90
VIII. Childbirth, Diseases of the Uterus, &c.	105	124
IX. Rheumatism, Diseases of the Bones, Joints, &c.	65	84
X. Diseases of the Skin, Cellular Tissue, &c.	15	12
XI. Old Age	686	648
XII. Violence, Privation, and Intemperance	308	293
I. Small Pox	130	556
Measles	404	255
Scarlatina	476	1,020
Hooping Cough	275	167
Croup	80	76
Thrush	111	120
Diarrhœa	331	414
Dysentery	59	44
Cholera	54	47
Influenza	12	8
Ague	3	6
Remittent Fever	6	13
Typhus	352	424
Erysipelas	55	85
Syphilis	9	8
Hydrophobia	1	..
II. Inflammation	79	7
Hæmorrhage	37	30
Dropsy	377	312
Abscess	41	30
Mortification	55	45
Purpura	5	7
Scrofula	30	45
Cancer	111	121
Tumor	23	11
Gout	10	10
Atrophy	124	201
Debility	258	287
Malformations	13	25
Sudden Deaths	150	108
III. Cephalitis	156	164
Hydrocephalus	475	413
Apoplexy	197	237
Paralysis	168	166
Convulsions	781	721
Tetanus	4	9
Chorea	·4	2
Epilepsy	41	54
Insanity	11	19
Delirium Tremens	23	22
Disease of Brain, &c.	112	122
IV. Laryngitis	6	7
Quinsey	21	32
Bronchitis	73	140
Pleurisy	15	23
Pneumonia	656	617
Hydrothorax	41	38
Asthma	113	104
Phthisis or Consumption	1,833	1,681
Disease of Lungs, &c	126	140
V. Pericarditis	8	28
Aneurism	8	8
Disease of Heart, &c.	218	290
VI. Teething	301	233
Gastritis	353	15
Enteritis		264
Peritonitis	14	26
Tabes Mesenterica	84	136
Worms	6	6
Ascites	11	27
Ulceration (of Intestines, &c.)	23	18
Hernia	17	20
Colic or Ileus	26	37
Intussusception	9	3
Stricture	7	5
Hæmatemesis	6	13
Disease of Stomach, &c.	66	86
Disease of Pancreas	·4	..
Hepatitis	17	21
Jaundice	29	28
Disease of Liver, &c.	113	89
Disease of Spleen	3	..
VII. Nephritis	4	5
Ischuria	2	..
Diabetes	4	2
Cystitis	3	3
Stone	8	7
Stricture	5	17
Disease of Kidneys, &c.	36	56
VIII. Childbirth	71	82
Paramenia	2	1
Ovarium Dropsy	5	3
Disease of Uterus, &c.	27	38
IX. Arthritis	·6	1
Rheumatism	30	31
Disease of Joints, &c.	35	52
X. Carbuncle	1	1
Phlegmon	·4	1
Ulcer	4	1
Fistula	4	3
Disease of Skin, &c.	5	6
XI. Old Age	686	648
XII. Intemperance	11	8
Privation	5	3
Violent Deaths	292	282
Causes not specified	47	28

QUARTERLY METEOROLOGICAL TABLE,

Compiled from the Weekly Tables furnished to the Registrar-General by the Astronomer Royal.

DEATHS registered in the Metropolis from Small Pox, Measles, Scarlatina, Hooping Cough, Typhus, Diarrhœa, Dysentery and Cholera, Influenza, Consumption, and other diseases of the Lungs; the numbers at each age,* and the total deaths† (except violent and sudden) in each of the 13 weeks ending June 29, 1844.

1844 Week ending	Phases of the Moon.	Mean height of the Barometer, from 72 observations, corrected and reduced to 32 deg. Fahrenheit.	THERMOMETERS. Highest during the week.	Lowest during the week.	Mean. Highest on each day, 6 observations.	Mean. Lowest on each day, 6 observations.	Mean. Difference.	Mean of 72 observations.	Dew Point. Mean of 72 results.	Self-Registering. Highest in the sun. During the week.	Highest in the sun. Mean of 7 observations.	Lowest on the grass. During the week.	Lowest on the grass. Mean of 7 observations.	Difference between the dew point temperature and air temperature. Mean of 72 differences.	Mean of the greatest on each day, 6 observations.	Mean of the least on each day, 6 observations.	Difference between the mean temperature of the week, and the mean temperature of the same week on an average of 25 years.	WIND. Pressure in lbs. on the square foot. General direction.	Greatest pressure in the week.	Mean for the week.	The amount of Horizontal movement of the air in each week.	Mean amount of Cloud, 0–10.	Rain in inches (7 days.)
		inches.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°				miles.		
July 6th	June 30th, full	29·650	70·7	51·2	65·6	53·3	12·3	59·9	55·0	104·3	66·6	39·3	46·2	3·9	8·9	0·5	−3·5	N.E.	9·0	0·01	450	9·7	1·29
„ 13th	7th, 3rd qr.	29·750	72·0	52·6	68·6	55·0	13·6	61·5	53·9	101·0	94·2	42·5	49·5	7·6	14·7	2·0	−1·5	N.N.W. and W.S.W.	8·0	0·2	920	9·2	0·71
„ 20th	15th, new	29·778	72·2	47·2	67·0	49·7	16·3	57·9	51·2	97·6	90·9	31·5	40·2	6·7	14·4	1·2	−5·4	W.	7·0	0·5	1115	5·4	0·07
„ 27th	22nd, 1st qr.	29·902	65·1	53·7	78·5	57·7	20·9	67·5	59·7	115·0	105·3	40·5	43·0	7·8	16·1	1·2	+5·1	N.E. & N.W.	1·5	0·04	595	3·8	..
August 3rd	July 29th, full	29·593	68·0	46·5	65·1	51·1	14·0	56·3	51·6	110·6	89·7	37·7	44·7	6·6	14·0	1·0	−4·9	W.S.W.	9·5	1·1	1950	6·9	0·79
„ 10th	6th, 3rd qr.	29·555	68·0	48·0	66·9	50·5	16·4	58·7	52·8	99·5	92·5	34·2	42·1	5·9	13·5	1·0	−4·0	S.W.	7·0	0·7	1142	5·0	0·44
„ 17th	14th, new	29·512	67·5	49·6	63·3	52·6	10·7	56·2	54·4	96·7	90·6	40·2	45·8	3·8	9·4	0·5	−4·2	W.	4·5	0·24	1315	7·7	0·92
„ 24th	21st, 1st qr. Perigee	29·675	72·5	45·7	66·5	50·4	16·1	58·4	52·1	96·8	86·9	36·9	44·4	6·3	12·6	1·2	−2·8	W.	3·5	0·24	611	7·1	..
„ 31st	28th, full	30·022	71·7	49·1	66·5	47·2	19·3	56·5	50·9	100·8	89·2	31·8	39·1	5·6	11·5	1·1	−3·7	N.W. and E.	3·0	0·03	485	4·2	..
Sept. 7th	4th, 3rd qr. Apogee	29·876	73·1	49·5	71·4	55·6	15·8	62·7	59·9	104·6	96·2	36·8	48·0	3·6	10·7	..	+3·5	E.N.E.& S.S.W.	3·0	0·1	710	5·6	0·19
„ 14th	12th, new in Equator	29·861	69·2	45·0	64·7	51·9	12·8	58·1	53·6	95·4	86·2	34·0	46·6	4·5	9·7	0·8	+0·5	N.E. & W.N.W.	1·0	0·04	520	9·3	0·46
„ 21st	19th, 1st qr	29·802	69·5	42·2	68·2	50·2	13·0	56·5	53·0	89·3	84·3	30·0	42·6	2·7	7·7	0·1	−0·9	W.S.W. & N.E.	4·0	0·2	830	6·5	0·59
„ 28th	26th, full	29·935	65·1	40·6	62·5	43·8	18·7	52·0	48·2	92·0	85·4	30·0	33·5	3·8	11·4	..	−3·7	N.N.E.	3·0	0·06	400	3·9	0·02
Mean, Highest, or Lowest, of the 13 weeks		29·762	85·1	40·6	66·9	51·4	15·5	59·9	53·6	115·0	90·0	30·0	43·5	5·3	11·8	0·8	−2·0	..	9·0	0·29	870	6·8	5·36

1844 Week ending	Small Pox.	Measles.	Scarlatina.	Hooping Cough.	Typhus.	Diarrhœa, Dysentery, and Cholera.	Influenza.	Phthisis or Consumption.	Other diseases of the lungs.	Deaths at Three Ages (exclusive of violent and sudden Deaths.) 0 to 15.	15 to 60.	60 and upwards.	Deaths from all causes (exclusive of violent and sudden deaths.)
July 6th	36	21	53	17	24	13	2	137	101	437	266	139	843
„ 13th	43	19	69	12	31	21	0	134	67	434	253	127	815
„ 20th	37	24	72	13	34	45	0	129	79	473	261	132	867
„ 27th	49	22	82	18	37	57	1	130	95	575	296	162	1024
August 3rd	44	13	75	13	33	71	0	145	95	549	290	143	973
„ 10th	46	14	80	12	39	71	0	132	79	522	237	149	918
„ 17th	58	21	69	8	26	50	1	130	86	462	261	137	906
„ 24th	47	23	93	9	32	36	0	116	78	490	267	146	903
„ 31st	36	21	82	12	21	31	0	116	80	426	210	127	763
Sept. 7th	49	26	99	12	99	27	1	129	81	500	239	152	893
„ 14th	37	16	70	16	41	24	3	121	76	422	255	132	810
„ 21st	37	18	87	14	33	34	0	124	66	471	249	123	843
„ 28th	37	15	95	11	34	25	0	133	96	451	273	137	862
Mean, Highest, or Lowest, of the 13 weeks	556	255	1020	167	424	505	9	1681	1101	6248	3367	1811	11435

* The ages of 9 persons were not specified in the Table.

† Inquests are held on violent and sudden deaths, which are returned irregularly.

REVENUE.

An Abstract of the Net Produce of the Revenue of Great Britain, in the Quarters and Years ended 10th October, 1843 and 1844; showing the Increase or Decrease thereof.—(Continued from p. 277.)

Sources of Revenue.	Quarters ended 10th October.	
	1843	1844
Customs—	£.	£.
Consolidated Duties	4,276,151	4,518,573
Sugar Duty applicable to Consolidated Fund	..	..
Ditto Ditto to Supplies	1,253,357	1,484,282
Total Customs	5,529,508	6,002,855
Excise	3,966,550	3,960,890
Stamps	1,650,366	1,665,688
Taxes	194,100	201,439
Property Tax	2,047,904	1,958,711
Post-Office	160,000	200,000
Crown Lands	20,000	10,000
Miscellaneous	17,744	220,961
Total Ordinary Revenue	13,586,172	14,220,544
Imprest and other Moneys	34,305	28,117
Repayments of Advances	230,932	123,692
Total Income	13,851,409	14,372,353
Amount applied to Consolidated Fund, exclusive of Advances	10,523,636	11,264,625
Ditto applied as Advances	140,000	184,225
Ditto as part of the Ways and Means of the Year	3,187,773	2,923,503
Total	13,851,409	14,372,353

Sources of Revenue.	Years ended 10th October.	
	1843	1844
	£.	£.
Customs	18,520,340	20,243,505
Excise	11,786,044	11,959,942
Stamps	6,464,256	6,533,385
Taxes	4,207,792	4,204,855
Property Tax	5,052,057	5,158,470
Post-Office	590,000	672,000
Crown Lands	127,500	135,000
Miscellaneous	1,644,361	696,357
Total Ordinary Revenue	48,392,350	49,603,514
Imprest and other Moneys	225,489	181,515
Repayments of Advances	728,434	956,593
Total Income	49,346,273	50,741,622
Amount applied to the Consolidated Fund, exclusive of Advances	33,586,465	35,754,568
Ditto applied as Advances	472,879	893,002
Ditto as part of the Ways and Means of the Year	15,286,929	14,094,052
Total	49,346,273	50,741,622

CORN.

Average Prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign and Colonial Wheat, during each Week of the Third Quarter of 1844; *together with the Average Prices for the whole Quarter.—(Continued from p.* 278.)

Returns received at the Corn Office, 1844.	Wheat.		Barley.	Oats.	Rye.	Beans.	Peas.	Date of Certificates of preceding Prices, regulating Duties for the Week ensuing.	Duties on Wheat per Quarter.	
	Weekly Average.	Aggregate Average of Six Weeks regulating Duty.	Weekly Average.	Weekly Average.	Weekly Average.	Weekly Average	Weekly Average.		From Foreign Countries.	From British Possessions out of Europe.
Weeks ended 1844	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		s. d.	s. d.
July 6 .	55 8	55 8	34 5	22 11	35 0	38 2	36 6	July 11	17 0	4 0
13 .	54 10	55 6	34 10	22 3	34 2	37 8	37 3	18	17 0	4 0
20 .	54 1	55 3	34 5	21 5	36 4	37 7	37 3	25	17 0	4 0
27 .	52 9	54 9	34 2	20 10	33 9	37 1	37 4	31	18 0	5 0
Aug. 3 .	51 0	54 0	34 0	20 3	37 6	34 7	36 5	Aug. 7	18 0	5 0
10 .	48 10	52 10	34 6	20 1	35 9	35 0	34 2	14	18 0	5 0
17 .	49 1	51 9	34 6	20 0	35 11	35 7	33 7	21	19 0	5 0
24 .	50 4	51 0	33 3	20 4	36 8	35 10	34 0	28	19 0	5 0
31 .	50 11	50 6	34 11	20 7	34 2	37 0	33 10	Sept. 4	20 0	5 0
Sept. 7 .	48 6	49 9	35 9	20 5	34 4	38 1	33 10	11	20 0	5 0
14 .	45 11	48 11	35 11	20 1	35 9	37 9	34 6	18	20 0	5 0
21 .	45 3	48 4	35 6	20 5	35 7	37 3	33 1	25	20 0	5 0
28 .	45 9	47 9	34 5	20 5	37 3	36 8	33 0	Oct. 1	20 0	5 0
Average of the Quarter	50 2	..	34 7	20 9	35 6	36 9	34 11	..	..	..

Foreign and Colonial Wheat and Wheat-Flour Imported in each of the Months ended 5th July, 5th August, and 5th September, 1844; *the Quantities upon which Duties have been paid for Home Consumption during the same Months; and the Quantities remaining in Bond at the close of them.—(Continued from p.* 278.)

WHEAT.

Months ended	Imported.			Paid Duty.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1844	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.
5th July . .	221,762	3,032	224,794	77,946	3,032	80,978	549,106	119	549,225
5th Aug. . .	166,858	14,331	181,189	351,586	14,331	365,917	351,430	119	351,549
5th Sept. . .	125,671	7,270	132,941	137,341	6,772	144,113	330,274	618	330,892

WHEAT FLOUR.

Months ended	Imported.			Paid Duty.			In Bond at the Month's end.		
	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.	Foreign.	Colonial.	Total.
1844	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
5th July . .	3,768	25,661	29,429	675	27,119	27,794	189,457	2,648	192,105
5th Aug. . .	39,669	209,845	249,514	5,098	209,783	214,881	212,867	2,709	215,576
5th Sept. . .	73,921	142,207	216,128	13,379	138,520	151,899	263,063	6,895	269,958

CURRENCY.

Quarterly Average of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 13th July, 10th August, and 10th September, 1844; and in the corresponding Quarters of the preceding Year.—(Continued from p. 279.)

Quarters ended	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
1844.	£.	£.	£.	£.	£.	£.
13th July .	21,246,000	13,977,000	35,223,000	22,471,000	15,767,000	38,238,000
10th August .	21,324,000	14,090,000	35,414,000	22,908,000	15,579,000	38,487,000
10th September	See Explanatory Note at page 361.					
1843.						
15th July . .	19,280,000	10,724,000	30,004,000	21,462,000	11,615,000	33,077,000
12th August .	19,358,000	11,218,000	30,576,000	21,890,000	11,820,000	33,710,000
9th September	19,496,000	11,727,000	31,223,000	22,394,000	12,018,000	34,412,000

Average Aggregate Amount of Promissory Notes which have been in Circulation in the United Kingdom, distinguishing the several Banks, or Classes of Banks, by which issued in each part of the Kingdom, with the Average Amount of Bullion in the Bank of England, during the four weeks ended the 20th July, 17th August, and 14th September, respectively —(Continued from p. 279.)

Banks.	Circulation during the Four Weeks ended		
	20th July, 1844.	17th Aug, 1844.	14th Sept. 1844.
	£.	£.	£.
England—Bank of England .	21,448,000	21,980,000	See p. 361
Private Banks. .	4,624,179	4,550,353	4,338,569
Joint-Stock Banks.	3,340,326	3,204,460	3,158,290
Scotland—Chartered Private & Joint-Stock Banks	2,903,322	2,894,853	2,940,456
Ireland—Bank of Ireland. .	3,440,700	3,378,125	3,359,150
Private and Joint-Stock Banks . .	1,974,284	1,993,533	2,052,262
Total . .	37,730,811	38,001,324	15,848,727
Bullion in the Bank of England	15,485,000	15,227,000	See p. 361

Consolidated Fund Operations.—The total income brought to this account in the quarter ended 10th October, 1844, was 12,904,541*l.*; the total charge upon it was 8,308,906*l.*, leaving a surplus of 4,595,635*l.* The amount of Exchequer Bills issued to meet the charge on the Consolidated Fund for the quarter ended 5th July, 1844, and paid off out of the growing produce of that fund for the quarter ended 10th October, 1844, after deducting 500,000*l.* paid off out of the Sinking Fund, was 4,200,895*l.* The surplus of the Consolidated Fund, quarter ended 10th October, 1844, was 1,672,182*l.*; and the probable amount of Exchequer Bills required to meet the charge on the Consolidated Fund, quarter ended October 10th, 1844, was 2,528,263*l.*

BANKRUPTCY.

An Analysis of the Bankruptcies in England and Wales, gazetted in each Month of the Quarter ended September 30, 1844; *showing the Counties and Branches of Industry in which they have occurred.* (*Continued from p.* 280.)

COUNTIES.	July.	August.	September.
Metropolis	32	23	17
Bedford	..	..	..
Berks	1	1	..
Bucks	..	..	..
Cambridge	..	2	1
Cheshire	3	..	1
Cornwall	..	..	..
Cumberland	1	1	..
Derby	..	1	1
Devon	2	..	..
Dorset	..	..	..
Durham	..	1	1
Essex	5	1	1
Gloucester	..	1	1
Hants	5	1	2
Hereford	..	..	..
Hertford	..	..	..
Huntingdon	..	..	..
Kent	..	..	5
Lancaster	13	7	11
Leicester	1	1	..
Lincoln	..	1	..
Middlesex (exclusive of the Metropolis)	..	..	..
Monmouth	..	..	1
Norfolk	1	..	..
Northampton	..	..	1
Northumberland	3	6	1
Nottingham	..	1	..
Oxford	1	..	..
Rutland	..	..	..
Salop	..	..	..
Somerset (including Bristol)	4	3	1
Stafford	1	1	1
Suffolk	1	..	1
Surrey (exclusive of the Metropolis)	..	1	..
Sussex	1	1	..
Warwick	2	3	1
Westmoreland	..	..	..
Wilts	2	..	..
Worcester	1	2	..
York (East Riding)	..	1	1
,, (North Riding)	..	1	..
,, (West Riding)	6	10	8
Wales	..	1	3
Total	86	72	60

TRADES.	July.	August.	September.
Agriculture and connected Trades.			
Farmers	1	1	1
Agricultural Implement Makers and Wheelwrights	..	..	..
Corn Factors	3	1	2
Millers and Malsters	1	2	2
Hop Merchants	..	..	..
Brewers	..	1	1
Horse and Cattle Dealers, and Woolstaplers	..	..	2
Mining and connected Trades.			
Mining Firms	..	..	..
Blasting Works	..	..	..
Manufactures.			
Woollen Manufactures	2	2	4
Cotton ,,	..	1	..
Linen ,,	..	1	..
Silk ,,	2	..	1
Printers and Dyers	..	..	..
Lace Manufacturers	..	..	..
Hosiery ,,	..	..	..
Hardware ,,	1	1	1
Earthenware ,,	..	1	..
Glass ,,	..	..	1
Paper ,,	..	..	..
Builders	3	3	1
Miscellaneous Manufactures	8	8	8
Commerce.			
Bankers and Merchants	7	1	3
Shipowners, Warehousemen, Brokers, and Wholesale Dealers generally	6	7	6
Retail and Handicraft Trades.			
Bakers	2	..	..
Butchers	2	2	..
Corn and Hay Dealers	..	..	..
Innkeepers and Victuallers	9	4	3
Wine and Spirit Merchants	3	1	2
Dealers in Grocery, Drugs, and Spices	7	5	7
Makers of, and Dealers in, Clothing	10	6	3
Makers of, and Dealers in, Furniture	2	..	..
Coach Builders	..	..	..
Miscellaneous	17	24	12
Total	86	72	60

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